

14920 RESULTET.PTO 15 MAR 2006

PCT - Sequence listing for submission.txt.TXT SEQUENCE LISTING

<110>	PERFORMANCE GENOMICS, INC.						
<120>	Insulin-Like Growth Factor-1 Receptor (IGF-1R) Polymorphic Alleles and Use of the Same to Identify DNA Markers for Reproductive Longevity						
<130>	31649-2137						
<150> <151>	us 10/662,613 2003-09-15						
<160>	22						
<170>	PatentIn version 3.2						
<210> <211> <212> <213>	1 4500 DNA Mus musculus						
<400>	1 ptctg gctccggagg agggtccccg acctcgctgt gggggctcgt gtttctctcc	60					
		120					
		180					
_		240					
atcact	gagt acttgctgct cttccgagtc gctggcctcg agagcctggg agacctcttc	300					
cccaac	cctca cagtcatccg tggctggaaa ctcttctaca actacgcact ggtcatcttc	360					
gagatg	gacca atctcaagga tattgggctt tataatctga ggaacattac tcggggggcc	420					
atcagg	gattg agaagaacgc cgacctctgt tacctctcca ccatagactg gtctctcatc	480					
ttggat	gcgg tgtccaataa ctacattgtg gggaacaagc ccccgaagga atgtggggac	540					
ctgtgt	ccag ggacattgga ggagaagccc atgtgtgaga agaccaccat caacaatgag	600					
tacaac	tacc gctgctggac cacaaatcgc tgccagaaaa tgtgcccaag tgtgtgcggg	660					
aagcga	agcct gcaccgagaa caacgagtgc tgccacccgg agtgcctggg cagctgccac	720					
acaccg	ggacg acaacacaac ctgcgtggcc tgcagacact actactacaa aggcgtgtgt	780					
gtgcct	gcct gcccgcctgg cacctacagg ttcgagggct ggcgctgtgt ggatcgcgat	840					
ttctgc	gcca acatccccaa cgctgagagc agtgactcgg atggcttcgt tatccacgac	900					
gatgag	rtgca tgcaggagtg tccctcaggc ttcatccgca acagcaccca gagcatgtac	960					
tgtatc	ccct gcgaaggccc ctgccccaaa gtctgcggcg atgaagagaa gaaaacgaaa 1	.020					
accatc	gatt cggtgacttc tgctcaaatg ctccaaggat gcaccatcct gaagggcaat 1	.080					
ctgctt	catta acatccggag aggcaataac attgcctcgg agttggagaa cttcatgggg 1	.140					

	PC	T - Seguenc	e listina f	or submissi	on.txt.TXT	
ctcatcgagg	tggtgaccgg	ctacgtgaag	atccgccatt	ctcatgcctt	ggtctccttg	1200
tccttcctga	agaaccttcg	tctcatctta	ggagaggagc	agctggaagg	gaactactcc	1260
ttctatgtcc	tagacaacca	gaacttgcag	cagctgtggg	actggaacca	ccggaacctg	1320
accgtcaggt	ccggaaagat	gtactttgct	ttcaatccca	agctgtgtgt	ctccgaaatt	1380
taccgcatgg	aggaagtgac	cggaaccaag	ggacgccaga	gcaaagggga	cataaacacc	1440
aggaacaacg	gagagcgagc	ttcctgtgaa	agtgatgttc	tccgtttcac	ctccaccacg	1500
acctggaaga	accgaatcat	cataacgtgg	caccggtacc	ggccgccgga	ctaccgggat	1560
ctcatcagct	tcacagttta	ctacaaggag	gcaccattta	aaaacgttac	ggaatatgac	1620
gggcaggatg	cctgtggctc	caacagctgg	aacatggtgg	atgtagacct	gcctccgaac	1680
aaggagggcg	agcctggcat	tttactgcat	gggctgaagc	cctggaccca	gtatgctgtc	1740
tatgtcaagg	ctgtgaccct	caccatggtg	gaaaacgacc	atatccgtgg	ggccaaaagt	1800
gaaatcttgt	acattcgcac	caatgcttca	gtcccttcca	ttcccctaga	tgtcctctca	1860
gcatcaaact	cttcctctca	gctgattgtg	aagtggaatc	ctccaactct	gcccaatggt	1920
aacttgagtt	actacattgt	gaggtggcag	cggcagcccc	aggatggtta	cctgtaccgg	1980
cacaactact	gctccaaaga	caaaataccc	atcagaaagt	acgccgatgg	taccatcgac	2040
gtggaggagg	tgacggaaaa	tcccaagaca	gaagtgtgtg	gtggtgataa	agggccatgc	2100
tgcgcttgcc	ctaaaactga	agctgagaag	caggctgaga	aggaggaggc	tgagtaccgt	2160
aaagtctttg	agaatttcct	tcacaattcc	atctttgtgc	ccaggcccga	aaggaggcgg	2220
agagacgtca	tgcaagtggc	caacacgacc	atgtccagcc	gaagcaggaa	caccacggta	2280
gctgacacct	acaatatcac	agacccggag	gagttcgaga	cagagtaccc	tttctttgag	2340
agcagagtgg	ataacaagga	gaggactgtc	atctccaacc	tccggccttt	cactctgtac	2400
cgcatcgata	tccacagctg	caaccacgag	gctgagaagc	tgggctgcag	cgcctccaac	2460
ttcgtctttg	cgagaaccat	gccagcagaa	ggagcagatg	atatccctgg	tccggtgacc	2520
tgggagccaa	gacccgaaaa	ctccatcttt	ttaaagtggc	cagaacccga	gaaccccaac	2580
ggattgatcc	taatgtatga	aattaaatac	gggtcgcaag	tcgaggatca	gcgggaatgt	2640
gtgtccagac	aggagtacag	gaagtacgga	ggggccaaac	tcaaccgtct	aaacccaggg	2700
aactatacag	cccggattca	ggctacctcc	ctctctggga	atgggtcatg	gacagatcct	2760
gtgttcttct	atgtccccgc	caaaacgacg	tatgagaact	tcatgcatct	gatcattgct	2820
ctgccggttg	ccatcctgct	gatcgttggg	gggctggtta	tcatgctgta	tgtcttccat	2880
agaaagagaa	ataacagcag	gttgggcaat	ggagtgctgt	atgcttctgt	gaaccccgag	2940
tatttcagcg	cagctgatgt	gtacgtgcct	gatgaatggg	aggtagctcg	agagaagatc	3000
accatgaacc	gggagctcgg	acaagggtcc	tttgggatgg Page	tctatgaagg 2	agtggccaag	3060

PCT - Sequence listing for submission.txt.TXT

ggtgtggtca	aggatgaacc	cgaaaccaga	gtggccatca	agacggtaaa	cgaggctgca	3120
agtatgcgtg	aaagaatcga	gtttctcaac	gaggcctcgg	tgatgaagga	gttcaattgt	3180
caccatgtgg	tccggttgct	gggtgtggta	tcccaaggcc	agcccaccct	ggtcatcatg	3240
gaactaatga	cacgcggtga	tctcaaaagt	tatctccggt	ctctgaggcc	agaagtggag	3300
cagaataatc	tagtcctcat	tcctccgagc	ttaagcaaga	tgatccagat	ggctggagag	3360
attgcagatg	gcatggccta	cctcaatgcc	aacaagttcg	tccacagaga	ccttgctgct	3420
aggaactgca	tggtagccga	agatttcaca	gtcaaaattg	gagatttcgg	tatgacacga	3480
gacatctacg	agacggacta	ctaccggaaa	ggcgggaagg	gtttgctgcc	tgtgcgctgg	3540
atgtctcccg	agtccctcaa	ggatggtgtc	ttcactactc	attctgatgt	ctggtccttc	3600
ggggtcgtcc	tctgggagat	cgccacgctg	gctgagcagc	cctaccaggg	cttgtccaac	3660
gagcaagttc	ttcgtttcgt	catggagggt	ggccttctgg	acaagccgga	caactgccct	3720
gatatgctgt	ttgaacttat	gcgcatgtgc	tggcagtata	accccaagat	gcggccctcc	3780
ttcctggaga	tcatcggcag	catcaaggat	gagatggagc	ccagcttcca	ggaggtctcc	3840
ttctactaca	gcgaggagaa	caagcctccc	gagccagagg	agctggagat	ggagctggag	3900
atggagcctg	agaacatgga	gagcgtccca	ctggaccctt	cggcctcctc	agcctccctg	3960
cctctgcctg	aaagacactc	aggacacaag	gctgagaatg	gcccgggccc	tggcgtgctc	4020
gttctccgcg	ccagttttga	tgagagacag	ccttacgctc	acatgaacgg	gggacgcgcc	4080
aacgagaggg	ccttgcctct	gccccagtcc	tcgacctgct	gatcctcgga	cacaccgaag	4140
cacgcgccaa	cagtaacgtg	tgtgccccac	tcggtgggcg	ggggggcggg	gaggggagag	4200
caggttgtaa	caatctattc	acaagcctcc	tgtacctcag	tggatcttca	gacctgccat	4260
tgctgcccac	gggagacggc	ttctctgcag	taaacacatt	tgggaccttc	cttttttcaa	4320
tatgcaagca	gctttttatt	tcctttaccc	gaacccttaa	ctgacatggg	cctctgcaaa	4380
ccttaatgac	aacacttaat	agcaacagga	cactcgagaa	ttgagtctct	tcgttctctg	4440
cctttttctc	tcctctgcct	tccctctctg	ccctctcccc	ttccacttcc	acgctctcct	4500

```
2
1373
<212>
      PRT
<213> Mus musculus
```

Met Lys Ser Gly Ser Gly Gly Gly Ser Pro Thr Ser Leu Trp Gly Leu $1 \ \ \,$ 10 $\ \ \,$ 15

Val Phe Leu Ser Ala Ala Leu Ser Leu Trp Pro Thr Ser Gly Glu Ile 20 25 30 Page 3

<400> 2

PCT - Sequence listing for submission.txt.TXT Cys Gly Pro Gly Ile Asp Ile Arg Asn Asp Tyr Gln Gln Leu Lys Arg 40 45Glu Asn Cys Thr Val Ile Glu Gly Phe Leu His Ile Leu Leu Ile 50 60 Ser Lys Ala Glu Asp Tyr Arg Ser Tyr Arg Phe Pro Lys Leu Thr Val 65 70 75 80 Ile Thr Glu Tyr Leu Leu Leu Phe Arg Val Ala Gly Leu Glu Ser Leu 85 90 95 Gly Asp Leu Phe Pro Asn Leu Thr Val Ile Arg Gly Trp Lys Leu Phe $100 \hspace{1cm} 105 \hspace{1cm} 110$ Tyr Asn Tyr Ala Leu Val Ile Phe Glu Met Thr Asn Leu Lys Asp Ile 115 120 125 Gly Leu Tyr Asn Leu Arg Asn Ile Thr Arg Gly Ala Ile Arg Ile Glu 130 140 Lys Asn Ala Asp Leu Cys Tyr Leu Ser Thr Ile Asp Trp Ser Leu Ile 145 150 155 160 Leu Asp Ala Val Ser Asn Asn Tyr Ile Val Gly Asn Lys Pro Pro Lys 165 170 175 Glu Cys Gly Asp Leu Cys Pro Gly Thr Leu Glu Glu Lys Pro Met Cys 180 185 190 Glu Lys Thr Thr Ile Asn Asn Glu Tyr Asn Tyr Arg Cys Trp Thr Thr 195 200 205 Asn Arg Cys Gln Lys Met Cys Pro Ser Val Cys Gly Lys Arg Ala Cys 210 220 Thr Glu Asn Asn Glu Cys Cys His Pro Glu Cys Leu Gly Ser Cys His 225 230 235 240 Thr Pro Asp Asp Asn Thr Thr Cys Val Ala Cys Arg His Tyr Tyr 245 250 255 Lys Gly Val Cys Val Pro Ala Cys Pro Pro Gly Thr Tyr Arg Phe Glu 260 265 270 Gly Trp Arg Cys Val Asp Arg Asp Phe Cys Ala Asn Ile Pro Asn Ala Page 4

Glu Ser Ser Asp Ser Asp Gly Phe Val Ile His Asp Asp Glu Cys Met 290 Glu Cys Pro Ser Gly Phe Ile Arg Asn Ser Thr Gln Ser Met Tyr 310 315

Cys Ile Pro Cys Glu Gly Pro Cys Pro Lys Val Cys Gly Asp Glu Glu 325 330 335

Lys Lys Thr Lys Thr Ile Asp Ser Val Thr Ser Ala Gln Met Leu Gln 340 345 350

Gly Cys Thr Ile Leu Lys Gly Asn Leu Leu Ile Asn Ile Arg Arg Gly 355 360 365

Asn Asn Ile Ala Ser Glu Leu Glu Asn Phe Met Gly Leu Ile Glu Val 370 375 380

Val Thr Gly Tyr Val Lys Ile Arg His Ser His Ala Leu Val Ser Leu 385 390 395 400

Ser Phe Leu Lys Asn Leu Arg Leu Ile Leu Gly Glu Glu Gln Leu Glu 405 410 415

Gly Asn Tyr Ser Phe Tyr Val Leu Asp Asn Gln Asn Leu Gln Gln Leu 420 430

Trp Asp Trp Asn His Arg Asn Leu Thr Val Arg Ser Gly Lys Met Tyr 435 440 445

Phe Ala Phe Asn Pro Lys Leu Cys Val Ser Glu Ile Tyr Arg Met Glu 450 455 460

Glu Val Thr Gly Thr Lys Gly Arg Gln Ser Lys Gly Asp Ile Asn Thr 465 470 475 480

Arg Asn Asn Gly Glu Arg Ala Ser Cys Glu Ser Asp Val Leu Arg Phe 485 490 495

Thr Ser Thr Thr Trp Lys Asn Arg Ile Ile Ile Thr Trp His Arg 500 505 510

Tyr Arg Pro Pro Asp Tyr Arg Asp Leu Ile Ser Phe Thr Val Tyr Tyr 515 520 525

PCT - Sequence listing for submission.txt.TXT Lys Glu Ala Pro Phe Lys Asn Val Thr Glu Tyr Asp Gly Gln Asp Ala 530 535 540 Cys Gly Ser Asn Ser Trp Asn Met Val Asp Val Asp Leu Pro Pro Asn 545 550 555 560 Lys Glu Gly Glu Pro Gly Ile Leu Leu His Gly Leu Lys Pro Trp Thr 565 570 575 Gln Tyr Ala Val Tyr Val Lys Ala Val Thr Leu Thr Met Val Glu Asn 580 585 590 Asp His Ile Arg Gly Ala Lys Ser Glu Ile Leu Tyr Ile Arg Thr Asn 595 600 605 Ala Ser Val Pro Ser Ile Pro Leu Asp Val Leu Ser Ala Ser Asn Ser Ser Ser Gln Leu Ile Val Lys Trp Asn Pro Pro Thr Leu Pro Asn Gly Asn Leu Ser Tyr Tyr Ile Val Arg Trp Gln Arg Gln Pro Gln Asp Gly
645 650 655 Tyr Leu Tyr Arg His Asn Tyr Cys Ser Lys Asp Lys Ile Pro Ile Arg 660 665 670 Lys Tyr Ala Asp Gly Thr Ile Asp Val Glu Glu Val Thr Glu Asn Pro 675 680 685 Thr Glu Val Cys Gly Gly Asp Lys Gly Pro Cys Cys Ala Cys Pro 690 700 Lys Thr Glu Ala Glu Lys Gln Ala Glu Lys Glu Glu Ala Glu Tyr Arg 705 710 715 720 Lys Val Phe Glu Asn Phe Leu His Asn Ser Ile Phe Val Pro Arg Pro 725 730 735 Glu Arg Arg Arg Asp Val Met Gln Val Ala Asn Thr Thr Met Ser 740 745 750 Ser Arg Ser Arg Asn Thr Thr Val Ala Asp Thr Tyr Asn Ile Thr Asp 755 760 765 Pro Glu Glu Phe Glu Thr Glu Tyr Pro Phe Phe Glu Ser Arg Val Asp 770 780

					PCT	- Se	quen	ce 1	isti	ng f	or s	ubmi	ssio	n.tx	t.TXT
Asn 785	Lys	Glu	Arg	Thr	val 790	Ile	Ser	Asn	Leu	Arg 795	Pro	Phe	Thr	Leu	туг 800
Arg	Ile	Asp	Ile	ніs 805	Ser	Cys	Asn	His	Glu 810	Ala	Glu	Lys	Leu	Gly 815	Cys
Ser	Ala	Ser	Asn 820	Phe	٧a٦	Phe	Ala	Arg 825	Thr	Met	Pro	Ala	Glu 830	Gly	Ala
Asp	Asp	Ile 835	Pro	Gly	Pro	val	Thr 840	Trp	Glu	Pro	Arg	Pro 845	Glu	Asn	Ser
Ile	Phe 850	Leu	Lys	Trp	Pro	Glu 855	Pro	Glu	Asn	Pro	Asn 860	Gly	Leu	Ile	Leu
Met 865	Tyr	Glu	Ile	Lys	Tyr 870	Gly	Ser	Gln	val	Glu 875	Asp	Gln	Arg	Glu	Cys 880
Val	Ser	Arg	Gln	G]u 885	Tyr	Arg	Lys	Tyr	Gly 890	Gly	Ala	Lys	Leu	Asn 895	Arg
Leu	Asn	Pro	Gly 900	Asn	Tyr	Thr	Ala	Arg 905	Ile	Gln	Ala	Thr	ser 910	Leu	Ser
Gly	Asn	Gly 915	Ser	Trp	Thr	Asp	Pro 920	٧a٦	Phe	Phe	Tyr	va1 925	Pro	Ala	Lys
Thr	Thr 930	Tyr	Glu	Asn	Phe	Met 935	His	Leu	Ile	Ile	Ala 940	Leu	Pro	val	Ala
11e 945	Leu	Leu	Ile	val	Gly 950	Gly	Leu	٧al	Ile	Met 955	Leu	Tyr	val	Phe	ніs 960
Arg	Lys	Arg	Asn	Asn 965	Ser	Arg	Leu	Gly	Asn 970	Gly	Val	Leu	Tyr	Ala 975	Ser
val	Asn	Pro	G]u 980	Tyr	Phe	Ser	Ala	Ala 985	Asp	val	Tyr	٧al	Pro 990	Asp	Glu
Trp	Glu	Val 995	Ala	Arg	Glu	Lys	Ile 1000		^ Me1	t Asr	ı Arç	g Glu 100		eu G	ly Gln
Gly	Ser 101(e Gly	/ Me1	t Val	l Туі 101		lu G	ly Va	al Al		/s ()20	aly v	/al \	/al
Lys	Asp 1025	G]ı	ı Pro	o Glu	ı Thi	10	y va Bo	al A		le Ly Page	10	nr \ 035	/al /	Asn (31u

- Ala Ala Ser Met Arg Glu Arg Ile Glu Phe Leu Asn Glu Ala Ser 1040 1045 1050
- Val Met Lys Glu Phe Asn Cys His His Val Val Arg Leu Leu Gly 1055 1060 1065
- Val Val Ser Gln Gly Gln Pro Thr Leu Val Ile Met Glu Leu Met 1070 1075 1080
- Thr Arg Gly Asp Leu Lys Ser Tyr Leu Arg Ser Leu Arg Pro Glu 1085 1090
- Val Glu Gln Asn Asn Leu Val Leu Ile Pro Pro Ser Leu Ser Lys 1100 11105 1110
- Met Ile Gln Met Ala Gly Glu Ile Ala Asp Gly Met Ala Tyr Leu 1115 1120 1125
- Asn Ala Asn Lys Phe Val His Arg Asp Leu Ala Ala Arg Asn Cys 1130 1140
- Met Val Ala Glu Asp Phe Thr Val Lys Ile Gly Asp Phe Gly Met 1145 1150 1155
- Thr Arg Asp Ile Tyr Glu Thr Asp Tyr Tyr Arg Lys Gly Gly Lys 1160 1170
- Gly Leu Leu Pro Val Arg Trp Met Ser Pro Glu Ser Leu Lys Asp 1175 1180 1185
- Gly Val Phe Thr Thr His Ser Asp Val Trp Ser Phe Gly Val Val 1190 1200
- Leu Trp Glu Ile Ala Thr Leu Ala Glu Gln Pro Tyr Gln Gly Leu 1205 1210 1215
- Ser Asn Glu Gln Val Leu Arg Phe Val Met Glu Gly Gly Leu Leu 1220 1230
- Asp Lys Pro Asp Asn Cys Pro Asp Met Leu Phe Glu Leu Met Arg 1235 1240 1245
- Met Cys Trp Gln Tyr Asn Pro Lys Met Arg Pro Ser Phe Leu Glu 1250 1260
- Ile Ile Gly Ser Ile Lys Asp Glu Met Glu Pro Ser Phe Gln Glu Page 8

PCT - Sequence listing f 1265 1270	For submission.txt.TXT 1275
Val Ser Phe Tyr Tyr Ser Glu Glu Asn Lys P 1280 1285	ro Pro Glu Pro Glu 1290
Glu Leu Glu Met Glu Leu Glu Met Glu Pro G 1295 1300	lu Asn Met Glu Ser 1305
Val Pro Leu Asp Pro Ser Ala Ser Ser Ala Ser 1310 1315	er Leu Pro Leu Pro 1320
Glu Arg His Ser Gly His Lys Ala Glu Asn G 1325 1330	ly Pro Gly Pro Gly 1335
Val Leu Val Leu Arg Ala Ser Phe Asp Glu A 1340 1345	rg Gln Pro Tyr Ala 1350
His Met Asn Gly Gly Arg Ala Asn Glu Arg A 1355 1360	la Leu Pro Leu Pro 1365
Gln Ser Ser Thr Cys 1370	
<210> 3 <211> 4973 <212> DNA <213> Mus musculus	
<400> 3 gctcattcat ttccactccg catttctgcc cctcgccggc	ctcgcccgcg cccgggactt 60
cggaccagtc tcgccaactg cgtcgcgctc tcccgccgcg	taggctccgg tggtcgttcc 120
ctccggggat cgggtggcgt ttgtcctcgc ctgcggcgat	ttgggctttg ctcctctttc 180
tgtacagttt tcctccttct tctgcatctc tgcgtttgca	aatggaggcc gacgacgccg 240
acagcccgcc ccggcgccc ccggcttccc gactccgccg	ccccgtgggc cgctgctgcc 300
ggcgctgagg ggccgccccg cgccaccctc cttgtccacg	ccgctttccg aggatcgtcg 360
cctgcgctct tgtttttgga cgagagtgag gactgagttg	gagacttttt ttttcttttt 420
ttctttctt tttttttt ttttctattt ttgagaaaag	ggaatttcgt cccaaataaa 480
aggaatgaag tctggctccg gaggagggtc cccgacctcg	ctgtgggggc tcgtgtttct 540
ctccgccgcg ctctctctc ggccgacgag tggagaaatc	tgtgggcccg gcattgacat 600
	tgtgggtttg gaattgaat oo
ccgcaacgac tatcagcagc tgaagcgcct ggaaaactgc	
ccgcaacgac tatcagcagc tgaagcgcct ggaaaactgc ccacatcctg ctcatctcca aggccgagga ctaccgaagc	acggtgatcg agggcttcct 660

	PC	T - Sequenc	e listing f	or submissi	on.txt.TXT	2.42
cttccccaac	ctcacagtca	tccgtggctg	gaaactcttc	tacaactacg	cactggtcat	840
cttcgagatg	accaatctca	aggatattgg	gctttataat	ctgaggaaca	ttactcgggg	900
ggccatcagg	attgagaaga	acgccgacct	ctgttacctc	tccaccatag	actggtctct	960
catcttggat	gcggtgtcca	ataactacat	tgtggggaac	aagcccccga	aggaatgtgg	1020
ggacctgtgt	ccagggacat	tggaggagaa	gcccatgtgt	gagaagacca	ccatcaacaa	1080
tgagtacaac	taccgctgct	ggaccacaaa	tcgctgccag	aaaatgtgcc	caagtgtgtg	1140
cgggaagcga	gcctgcaccg	agaacaacga	gtgctgccac	ccggagtgcc	tgggcagctg	1200
ccacacaccg	gacgacaaca	caacctgcgt	ggcctgcaga	cactactact	acaaaggcgt	1260
gtgtgtgcct	gcctgcccgc	ctggcaccta	caggttcgag	ggctggcgct	gtgtggatcg	1320
cgatttctgc	gccaacatcc	ccaacgctga	gagcagtgac	tcggatggct	tcgttatcca	1380
cgacgatgag	tgcatgcagg	agtgtccctc	aggcttcatc	cgcaacagca	cccagagcat	1440
gtactgtatc	ccctgcgaag	gcccctgccc	caaagtctgc	ggcgatgaag	agaagaaaac	1500
gaaaaccatc	gattcggtga	cttctgctca	aatgctccaa	ggatgcacca	tcctgaaggg	1560
caatctgctt	attaacatcc	ggagaggcaa	taacattgcc	tcggagttgg	agaacttcat	1620
ggggctcatc	gaggtggtga	ccggctacgt	gaagatccgc	cattctcatg	ccttggtctc	1680
cttgtccttc	ctgaagaacc	ttcgtctcat	cttaggagag	gagcagctgg	aagggaacta	1740
ctccttctat	gtcctagaca	accagaactt	gcagcagctg	tgggactgga	accaccggaa	1800
cctgaccgtc	aggtccggaa	agatgtactt	tgctttcaat	cccaagctgt	gtgtctccga	1860
aatttaccgc	atggaggaag	tgaccggaac	caagggacgc	cagagcaaag	gggacataaa	1920
caccaggaac	aacggagagc	gagcttcctg	tgaaagtgat	gttctccgtt	tcacctccac	1980
cacgacctgg	aagaaccgaa	tcatcataac	gtggcaccgg	taccggccgc	cggactaccg	2040
ggatctcatc	agcttcacag	tttactacaa	ggaggcacca	tttaaaaacg	ttacggaata	2100
tgacgggcag	gatgcctgtg	gctccaacag	ctggaacatg	gtggatgtag	acctgcctcc	2160
gaacaaggag	ggcgagcctg	gcattttact	gcatgggctg	aagccctgga	cccagtatgc	2220
tgtctatgtc	aaggctgtga	ccctcaccat	ggtggaaaac	gaccatatcc	gtggggccaa	2280
aagtgaaatc	ttgtacattc	gcaccaatgc	ttcagtccct	tccattcccc	tagatgtcct	2340
ctcagcatca	aactcttcct	ctcagctgat	tgtgaagtgg	aatcctccaa	ctctgcccaa	2400
tggtaacttg	agttactaca	ttgtgaggtg	gcagcggcag	ccccaggatg	gttacctgta	2460
ccggcacaac	tactgctcca	aagacaaaat	acccatcaga	aagtacgccg	atggtaccat	2520
cgacgtggag	gaggtgacgg	aaaatcccaa	gacagaagtg	tgtggtggtg	ataaagggcc	2580
atgctgcgct	tgccctaaaa	ctgaagctga	gaagcaggct	gagaaggagg	aggctgagta	2640
ccgtaaagtc	tttgagaatt	tccttcacaa	ttccatcttt Page	gtgcccaggc 10	ccgaaaggag	2700

PCT - Sequence listing for submission.txt.TXT 2760 gcggagagac gtcatgcaag tggccaacac gaccatgtcc agccgaagca ggaacaccac 2820 ggtagctgac acctacaata tcacagaccc ggaggagttc gagacagagt accctttctt tgagagcaga gtggataaca aggagaggac tgtcatctcc aacctccggc ctttcactct 2880 2940 gtaccgcatc gatatccaca gctgcaacca cgaggctgag aagctgggct gcagcgcctc 3000 caacttcgtc tttgcgagaa ccatgccagc agaaggagca gatgatatcc ctggtccggt 3060 gacctgggag ccaagacccg aaaactccat ctttttaaag tggccagaac ccgagaaccc 3120 caacggattg atcctaatgt atgaaattaa atacgggtcg caagtcgagg atcagcggga atgtgtgtcc agacaggagt acaggaagta cggaggggcc aaactcaacc gtctaaaccc 3180 3240 agggaactat acagcccgga ttcaggctac ctccctctct gggaatgggt catggacaga 3300 tcctgtgttc ttctatgtcc ccgccaaaac gacgtatgag aacttcatgc atctgatcat tgctctgccg gttgccatcc tgctgatcgt tggggggctg gttatcatgc tgtatgtctt 3360 3420 ccatagaaag agaaataaca gcaggttggg caatggagtg ctgtatgctt ctgtgaaccc 3480 cgagtatttc agcgcagctg atgtgtacgt gcctgatgaa tgggaggtag ctcgagagaa gatcaccatg aaccgggagc tcggacaagg gtcctttggg atggtctatg aaggagtggc 3540 3600 caagggtgtg gtcaaggatg aacccgaaac cagagtggcc atcaagacgg taaacgaggc 3660 tgcaagtatg cgtgaaagaa tcgagtttct caacgaggcc tcggtgatga aggagttcaa ttgtcaccat gtggtccggt tgctgggtgt ggtatcccaa ggccagccca ccctggtcat 3720 3780 catggaacta atgacacgcg gtgatctcaa aagttatctc cggtctctga ggccagaagt ggagcagaat aatctagtcc tcattcctcc gagcttaagc aagatgatcc agatggctgg 3840 3900 agagattgca gatggcatgg cctacctcaa tgccaacaag ttcgtccaca gagaccttgc 3960 tgctaggaac tgcatggtag ccgaagattt cacagtcaaa attggagatt tcggtatgac 4020 acgagacatc tacgagacgg actactaccg gaaaggcggg aaggggttgc tgcctgtgcg 4080 ctggatgtct cccgagtccc tcaaggatgg tgtcttcact actcattctg atgtctggtc cttcggggtc gtcctctggg agatcgccac gctggctgag cagccctacc agggcttgtc 4140 4200 caacgagcaa gttcttcgtt tcgtcatgga gggtggcctt ctggacaagc cggacaactg 4260 ccctgatatg ctgtttgaac ttatgcgcat gtgctggcag tataacccca agatgcggcc ctccttcctg gagatcatcg gcagcatcaa ggatgagatg gagcccagct tccaggaggt 4320 4380 ctccttctac tacagcgagg agaacaagcc tcccgagcca gaggagctgg agatggagcc 4440 tgagaacatg gagagcgtcc cactggaccc ttcggcctcc tcagcctccc tgcctctgcc tgaaagacac tcaggacaca aggctgagaa tggcccgggc cctggcgtgc tcgttctccg 4500 4560 cgccagtttt gatgagagac agccttacgc tcacatgaac gggggacgcg ccaacgagag

```
PCT - Sequence listing for submission.txt.TXT
                                                            4620
ggccttgcct ctgccccagt cctcgacctg ctgatcctcg gacacaccga agcacgcgcc
                                                            4680
4740
taacaatcta ttcacaagcc tcctgtacct cagtggatct tcagacctgc cattgctgcc
cacgggagac ggcttctctg cagtaaacac atttgggacc ttccttttt caatatgcaa
                                                            4800
                                                            4860
qcaqcttttt atttccttta cccgaaccct taactgacat gggcctctgc aaaccttaat
qacaacactt aatagcaaca ggacactcga gaattgagtc tcttcgttct ctgccttttt
                                                            4920
                                                            4973
ctctcctctg ccttccctct ctgccctctc cccttccact tccacgctct cct
<210>
```

<210> 4 <211> 131

<212> PRT

<213> Mus musculus

<400> 4

Leu Phe Glu Leu Met Arg Met Cys Trp Gln Tyr Asn Pro Lys Met Arg $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Pro Ser Phe Leu Glu Ile Ile Gly Ser Ile Lys Asp Glu Met Glu Pro $20 \hspace{1cm} 25 \hspace{1cm} 30$

Ser Phe Gln Glu Val Ser Phe Tyr Tyr Ser Glu Glu Asn Lys Pro Pro 35 40 45

Glu Pro Glu Glu Leu Glu Met Glu Leu Glu Met Glu Pro Glu Asn Met 50 55 60

Glu Ser Val Pro Leu Asp Pro Ser Ala Ser Ser Ala Ser Leu Pro Leu 65 70 75 80

Pro Glu Arg His Ser Gly His Lys Ala Glu Asn Gly Pro Gly Pro Gly 85 90 95

Val Leu Val Leu Arg Ala Ser Phe Asp Glu Arg Gln Pro Tyr Ala His 100 105 110

Met Asn Gly Gly Arg Ala Asn Glu Arg Ala Leu Pro Leu Pro Gln Ser 115 120 125

Ser Thr Cys 130

<210> 5 <211> 446

<212> DNA <213> Mus musculus

	PC	T - Sequenc	e listing f	or submissi	on.txt.TXT		
<400> 5 aacgaggctg ca	agtatgcg	tgaaagaatc	gagtttctca	acgaggcctc	ggtgatgaag	60	
gagttcaatt gt	caccatgt	ggtaagaagc	caagatgaga	catggacaga	aagtatggac	120	
agaaaggacc ac	cctgtatg	tccttggcca	gctacggaat	tgttgccttg	ccctcttccc	180	
agtgggtagt tt	ccccgttg	cattcttgcc	acccacagac	ccttgaggtg	ggagcctcgc	240	
cctcgccctc cc	caccagaac	tctgctcctg	gctacaggcc	ccagcaccac	ccagttccga	300	
gaggcgtagg to	catcatgtg	ggatgccccc	ctcccctct	gagtcctttt	cttgattcct	360	
ccaggtccgg tt	gctgggtg	tggtatccca	aggccagccc	accctggtca	tcatggaact	420	
aatgacacgc gg	gtgatctca	aaagtt				446	
	L usculus						
<400> 6 gaattccaga to	ggaagctga	cttcctgctc	agccctatta	aaaaaaaca	caggctttcc	60	
tgcctctgag co	ccttcgcc	acaaataact	tgagtgccat	gcacggaggt	gcccacttgt	120	
ggcttaggtt ct	ctcagacc	ttgtttgtcc	ttcagcccct	tggggaggag	cccaggctac	180	
cacctgctgt co	ctaagcct	aggacccagt	ggagaccatc	gaattgcaga	tttagacaga	240	
attaaccatc ac	agggcctc	ataccatcct	ttttaaagga	ccaggccttg	atggagactg	300	
cagtcgccaa co	cccatggt	gcttttgcta	ctatggaaac	actgaaataa	ccaacacaca	360	
cactggttgt gg	gatgccact	gaacacacac	acacacacac	acacacac	acacacacac	420	
tggttgatgc ct	ctgaaccc	caaaaggtca	gcctggaagg	aatggtggct	gctctgtcct	480	
ccatctcagc cg	gcacatctg	aagtcacccc	agccacaggc	acctgtcatt	gtcacagctg	540	
gtccctatgg gc	ttactctt	tcctcacgat	gctcttattt	ttagtcagac	accaaagcgc	600	
tttatttatt tt	tagttaga	cacatttggc	acatttcaag	ttttccaact	tgtattcgat	660	
aaagggaaac aa	aggattcc	tgtcacctgt	cctaattgaa	agcttctttg	ataaatactt	720	
tcggacagtg at	tcatacta	tcagccttcc	aaaaggagga	aggaaaaaaa	aaaaaaagaa	780	
aagaaaagag ca	attcttttg	agacactctt	attcccttgc	acttctgatt	tgttttttt	840	
ttttttttt tt	atttcggg	tccagagatg	gaatggctca	aattacattt	gacgtcctca	900	
ggaaaccata ct	cttggtaa	aagcagtgcc	tgtctcaaat	gaaatatggg	catggaaatg	960	
tgctgccccc to	ttggactc	acgtctttcc	ctacatttct	ctcatcagcc	agcagttgct	1020	
gggagtcagg cg	gccattggg	aaatgcccac	tggatcccag	agtgtggcct	gcctttatta	1080	
gtaatgtttt ga	agtttgccg	gaggacagac	tcttcatttt	attggagccc	ctagttgtgt	1140	
aaatcttgtc tt	gacaactg	gtatgtagac	agatggtgaa Page		tctaacaaac	1200	

PCT - Sequence listing for submission.txt.TXT agcctttaga ttaaggtgtt ggctgggacc aacagtaaaa tgagagacca ggcgaacctg 1260 1320 cagtcctccc cagggttcga tgattctacc acattttctg gctgactacc caactctatt 1380 ccaaggcagt cttgatgggg aatgaggctt agcccagcaa aacaagacct tctaaccttg 1440 ctcccggagt tgtctttcct aatttaaaac aaacaaggat gtagtttcct caaagctgaa 1500 tgtggttcta aagtgtgtga aatgtgtgtt gatgggtttt taatgatcct agaggaagct 1560 ggcttctcgg tctttctact taatctcaac attttctaag ccgttcttta gagctgcagg 1620 ttcccacagc agctgcaaga ctgtgtatcc tatcagtcaa agccagatgg tagtcctgag atggtgggcc attctgttga aaagctttct gtcccctgaa gtttttctcc ctaggaacca 1680 1740 atcctgatga tgggccacga ccaatacact cagcagttgc caggcacagc tggatcccct 1800 ctccagtgct gctacctact ctagaggccc tggggtccag cgacttgatg tagcatcctg atcttttaca gactggaaag tgtggcaact gagaagtatg cgctgagagt caggtgaggg 1860 1920 actcaaaccc tcagtcatac tccagataaa actgatcagg acgatgctca accctacctg 1980 cagcccaagc tgagatgagg ctcccctcct ctcagtctga catgctagcc tcccccagga 2040 ggaggccaca catttttcat tttagaaata tagatcaaga agaaattgta aagaaagaga 2100 actccttgca aatctcacta gggttgcctg atgctgacat cttcaatgtc caatccaatg 2160 tactaacatc agtacaatta agaaagagag aagcagagag agggggggagaa ggaagggaag 2220 gagaacggga tggaggggtt gaggaatgag tatgtgtgca cgtgcacaca gaccgctcta 2280 tacaatttag accagtgcaa ggcttcctgg aattgcctcc acctcaaaac gccttcccct 2340 gctactccca ccttagcttc ttccgcactt tcttccccca ttttaacacg tggtgtcctt 2400 ttcagactca tttggctgta ataaaatatc cagaaaacaa acaaacgaca aaggataaag 2460 gagtttattt ccgtttacaa ttccaggtta cagtccatcg tggtgggaaa gtcagcagca 2520 ggaacttcag agaattggtc gcatcacatc cacagtcaag agcagagaga aatgcataca 2580 tatttgctgt cttgtttgct ttctcatgtt cagcttggat ttctccattc ttttatagtt 2640 caggactcaa tgcctaggga atgacactgc ccatagtgaa ctgggttccc ccacatcaat 2700 taacaagaat tgttgaggaa ttgggttggc ttgtggacat ggttttttt tggaggatta 2760 tcttagttaa gctaattgat ataagcagaa ccattcccta ggcaatgatt ggcctgtggg catgtcaaca tttcctagga atgttggcct gtgagtatgt ctgtgcccac aagtaagaca 2820 2880 attggctaat tgatatgaga aggcccagcc cactgtaggt ggtaccattc cttaggctgg 2940 agatccttga gctgtaggag agaggagaaa tcaaactgag cacaagcaag tgagcatgtg tgcatctctc tgctctttga ctgtggatgc tatgtgactg ttgtttgaag tcctgcctca 3000 3060 actttcccac agtgatgggc tataacataa ttatatgctg aaatgaattc ctctctcctc

taanttoott	PC tcgttgttgt	T - Sequenc				3120
	ggatatatag					3180
	tagtttccag					3240
_	tctaaaaaaa					3300
	cctgagttca	_				3360
	ctgatgccct					3420
	aaataaatct					3480
	aatatgtgag					3540
						3600
	cattgtatgt					3660
	ctgggaatta	_				3720
_	tatttattgt					3780
	tttctcagta					
_	agagccaaca					3840
	ttgggtggtg					3900
	gtcgagagag					3960
	tgagatctgc					4020
gactctatac	catctgggct	tccccttctc	tgaccttgtc	taggggactc	cctatactct	4080
ctacctggga	aaggtcaagt	agcctcggaa	gaccaacaaa	cttcctcttt	tccgcagaag	4140
aacccaccca	acaagtaccc	gggattcctg	aaatgcctct	ccatacaaat	gaggaattcc	4200
aagaacttta	aactctaacc	aatgattttc	atttaccctg	aaaactcctt	cacactctcc	4260
aaggtcctgg	tttaccccaa	ataaagtgta	ttcgtacaag	ccccacccta	gtagaggtat	4320
ggaggtatgc	tcacaaacca	agatcggcta	agagagctgt	tttcattgaa	gattgttgga	4380
gaaggccttc	ttctaaaaga	gctgtaactc	taagatcctt	cgggaaggcc	ttctctccct	4440
tccctcccc	tcccccact	agcactcact	cccagcagga	ccctaatcct	gtataaccct	4500
cccccccc	ccattctgga	cactgtttca	tccttcccac	ccagtgtgca	gtggcatctg	4560
gatacctccc	tgactatgtt	tcatacagtc	aattctgagg	aagcccccag	attagcaagg	4620
ctgaggttct	ctggggccta	tagaacttgt	tgccaggtga	tagaacttgt	tactgggtag	4680
tgtgggctgg	tttgagcaaa	cctgggtatc	tttggtttca	ggttttgggc	ccttccggca	4740
gcacctagtg	aattccagct	gggaagccgt	gaaggtaaat	cctgccgttt	gccccccc	4800
cccccccc	ccgggccaac	ctggttcctt	ctgtggctct	tgggaaaccc	caatgccaat	4860
gcgcgggact	cctaagaaac	cagagtcacc	ttggaaggaa	ggcaagcagt	gggcccctgg	4920
aagaaaggct	tgtatttggt	cctggaatgg	tgtgacttgc Page	ctggtcaggt 15	acttctctcg	4980
			-			

PCT - Sequence listing for submission.txt.TXT tttgtccagg gacactccta ggtgggacca aggcccatgt aggctctact ctacgtaggg 5040 5100 ctagattctt gccctctctt cctttggatg tggggtctgg ggaaagtcat tttcaccagc 5160 tcttgtcctc acctacgcat gcggaagtga taacatggat gtctctggcc tccactgaca 5220 gctcagggtg agggcagcct tgtccacact gctctgtgtg agcccagcat ggggcgtggg tgagaacctg gccagtgctc gtgactgtcg acagcacgct tgcttttgag gacatagcta 5280 5340 accaggagaa gggaagtcct ctgaccgccc actgtgcata ggagggcagg actccctggc 5400 ccaccccac ctccctaggt caactgtctg ccatcagtcc tcatgtgggt gtcacttaga 5460 ggctctgcga attgaaagct gcctgttcgc acttggcttt caacttcaca ctgatgttgg 5520 accaagccaa atgtggggcc tggagtctat tctcagagtt tcccaggcca gctgagaaac 5580 gcagcaaagc tgctagcgtc atgcactcac agccaccgtg gcactgactt tgtggtctga caacgcagag gcaggcagga gactcttgat ccttgagtta gcatttgggc ttttgctttt 5640 5700 ccaatcataa aaaagcccag agacccttgg actcattgcc aagccttgct ctggtacaca 5760 aggtaacaga gaggccagga ccagactttc atgagctcct ggctttctgc aaccagtatt tgatcagcag gacttctgcc aagtcctcag tagtcccaga cccttttgtt tctttctgca 5820 5880 gccgtaaaca atggaaaaga gccagactgc ttctggtttc tggtttgcct ctcagtttcc 5940 ccagttgcaa gtagtggcat tcaaaaacct tgctcgagtt ttgatgcctc cgtttcccaa 6000 6060 agttgaggaa gtcacatgac atcccaaaga cctcttgggc atgctgatag agctcacagg 6120 ttgtccattc ccaccaggag gcttttctgt ttgtctggta cacagctgca gacacatggg 6180 atgagggtca gatcagcaca ggaagtggca gaagggagag ggttacctga ggtggttggg 6240 aaaccccagt gcttgggact gctagtaatc aaagtcacct tggagggaag gcaagccagt 6300 gaccactgga agaaaagttt gtctttggtc cttgggtggt gtgacttgac tggtcaggta 6360 cgtcttccat gtgtgcagta aagaaaagtg gctaaggagg ctcaaggctc attaagcttg 6420 gtgaagcaaa ccagacagac acagggactg gggcttgcct gaaggcatat agtcagacat 6480 gcagacagcc aaggatagct ctgaaaagtg cacacacata cacactcaca tgcactatac 6540 acacacaca acatacacta ttcctacaca catataccac aaacactata cacataccac 6600 6660 cacacacaca tgcactacac acacatatat acacacatac actctcactc aggagctata 6720 ggctgaggaa agcaagcata cactggaatg gcaggtaagg acaaaatctg tgttaagggc tggaggtatg gcttagttag tagagaactt ggttgcatgc atgtgggtct gggtaacatc 6780

ccagcactac ataaaatcag gcatggtgtt atacctagta ctagggaagt agaggcagta

6840

gaattggaac	PC ttcaaggcta	T - Sequenc tgctctgact	e listing f gctgcagact	or submissi ctcatggagt	on.txt.TXT ttttgtgaga	6900
atttaaaatt	caaattctgg	gtttggcatg	gtgacccatg	cctttaatcc	cagccagcat	6960
tcaggaggta	gaggcaggca	gattactgtg	ggtttaaggc	tagcctggtc	tgtacagtga	7020
gttccaagac	aggaatatat	agagagagac	cctgtttcag	aacaaacaaa	aataaaactc	7080
aaacttctta	caaagaaatg	tgaactatca	gttcctagcc	taagatcacc	tgatacacaa	7140
gaaaataaaa	taccatgtta	aaaaaaatca	gtagatgccg	ttttaaaaaa	cagaattata	7200
accaggcagt	ggtggcacat	gcctttaata	aacccagcac	ttgggaggca	gaggcaggca	7260
gatttttgag	tttgaggcca	gcctggttta	caaagtgagt	tccaggacag	ccagggctac	7320
acagagaaac	cttgtctcaa	aaaatcaaaa	aaaaaaaaa	aaaaaagata	gcagtctgag	7380
aaattagaac	tatagctgac	ttaaaagaca	gcttagatct	gtggtcagtg	aaagatactg	7440
ctcacaagag	actgtatcac	ttgagtccac	ttgcattaat	gtccctagta	agtaaatata	7500
ttgagagagg	aagtaggtta	gtgataggct	aaggtggaag	gacacagtaa	atgaatgtga	7560
agtttcctta	aagtacattt	atttatttgt	gtgaccatgt	gtgtgtgtgt	ctgtctgtct	7620
gtgcacacca	tggcttgccc	atgaaggtca	aaggacaaca	ggtaggaagg	agctagaact	7680
ctccttcccc	tgtataggac	ctagggatgg	agctcacccc	agacatcggg	tttgggcatc	7740
aggaaccttt	accccgagcc	tctcacatac	ttctttagga	ttctttaggt	tgtaattcaa	7800
aggctctggc	accgattgcg	gtgatggttg	gttgtataac	tcttgatggt	gatggttata	7860
taactgagca	tactgaaaga	tgtggagtta	aatagggtaa	gtacgtggaa	tgtgaataag	7920
ctatctctta	ggagatagat	gataggaaga	taggatagat	agatagatag	atagatagat	7980
agatagatag	atgtgattag	atagatagat	agatagatag	atagatagat	agatagatag	8040
agataggtga	tagactttac	ccacatgtac	acatatatag	ctgttcagaa	acagacgaag	8100
agaaattagt	aaactagaat	atagatatgg	agatattatt	caaaggacaa	tataaagatg	8160
ggcaaacaag	catagagggg	ataatgtaaa	tagtaaagga	agtttctgtt	taaatagaat	8220
tccagaggaa	aataacagcg	agaatggaag	aaaaccatct	tcaaatatac	agctacaatg	8280
tatgggattg	gaataggttt	ggtcccatag	actcctgtgt	ttgaatgctt	ggcccacaag	8340
aagtggcact	gttaggaggt	gtggccttgt	tggatgtttg	accttggtgg	aggaagtata	8400
acactgtagg	ggcagacttt	gaagtctcct	atgctcacgc	tatgcccatt	gtggcacacg	8460
gtctcctttc	tgttgcctgt	ggatcaagat	gtagaactct	tgggctggtg	agatggctca	8520
gtgggtaaga	gcacccgact	gctcttccga	aggtctggag	ttcaaatccc	agcaaccaca	8580
tggtggctca	caaccacccg	taatgagttc	tgatgccctc	ttctggtgtg	tctgaagaca	8640
gctacagtga	acttacatat	aataaataaa	taaataaata	aataaataaa	taataaatct	8700
ttaaaaaaaa	aaagatgtag	aactctcagc	tccttctcca Page	gtgctatgtc 17	tgcctggatg	8760

PCT - Sequence listing for submission.txt.TXT 8820 ttgccttgct tcctgctctg acaataatgg agtaaacctt tgaaattgta agccagcccc 8880 caattaaatg ttttccttta taaaagttga cttggtcatg gtgtctcttc atagcaatgg 8940 aaaccctaac aaaggcacaa tggttaagaa tattccagag ggactggaga gagatggctc 9000 agtggttaag agcactgttc ttccagaggt cctggagttc aatccccagc aaccacatag 9060 tggctcacaa acatttgtaa tgggatctga tgccctcttc tggtgtgtct aaagactgta 9120 ctcacattca taaaataaat aaatctttaa aaaaatttcc agaactgatg aaatacttga 9180 atccacagag atagaaataa agaaaatcca cacctaaaca tagtagagtt ggagactgca aaagactgat taaggcttta gagtagccag agaggagatg gcttacttac aaaaatggat 9240 9300 actctaacta gtagtctagg gctaactttc tcaaaaatag caatacaagc tcaaaagcag 9360 tacagtaata acctacagaa tgccaaaatt gtagctgctg aacagaaacc gtgtagctag 9420 gagatcattc ctcgagaata aggctggggc tggagagatg gcttcgtggt taggagccct 9480 tagcggttat gctcttcctg aggacctgcg tcaattccca gcgcccacgt caggtagttt 9540 ccaactgcct ttgatcccag ctccaaagtg aacctctaac ctttgggagc acttgcgttc 9600 9660 tttttttttt ttttaaagaa taaggctgga gtaaaaacat tttcacaaaa ataaatgtca 9720 ggtttactct cagaaggatg acacaagggg actgtaaaaa ggacacttgt cagaagagaa 9780 gaaaattatc acaaaaatgg tgtcttagtc agggttttat tgctgtgaag agacactgtg 9840 aacacagaat tgggggtggc ttatagtttc aggggttcag tccattattg tcatgacaag 9900 aaacatggag gtaggcaggc agacaaagga caggagaagg agctgcgagt tctacatctt 9960 gatccacagg cagccatagg agactatatg ctatactgtg catacctcaa gcataagaga 10020 cctcaaagtc actatgggga atgcttgccc catagtgact caatttctcc aacaaagcca 10080 tacctatcca acaaggccac acctcttaat atagtgctga atagtgctgc tccctatgga 10140 ccaagcattc aaacacagga gtctagagtc ttatgagggc cattcctatt ccaaccactg cagatggtat agaaatcact gggaagcctg gcagtggtga cgcatgcctt taatcccagc 10200 10260 acttgggagg cagaggcagg tggatctctg agtttgaggc cagcctggtc tacagagtga 10320 gttccaggac agccagggct atacagagaa accctgtctc aaaaaaacaaa aaaacaaaaa 10380 10440 gagagagaga gagagagaga gagagagaga gaaagaaatc actgggaaat ggtgagtctg 10500 agggtagaaa tctgtaccag caccaggcag tgatggcaca cacttttaat cccagtactc 10560 aagatctggt ggatgtctga gttaaaggcc agccttatgt acagagtgag ttccagatca 10620 accaaggcta catagaaaaa ccctgtcttg aacatcaaaa caataaacaa acataaagtc

	PC	T - Sequenc	e listing f	or submissi	on.txt.TXT	10680
		catgtaatag				
		tcggtggtct				10740
acttcaagct	catctccacc	atctcttcag	tgacaggttc	tggagcaggc	tctgctcaat	10800
cttcttgctt	ttaataggac	caaaggatgg	tgactagaca	cacctgcatc	ggcacctgga	10860
aagtgaggtt	cccgagatgg	ctggctatgc	ccaggctctt	ggtaccccag	ttggccttcc	10920
ttttggcccc	tggactctag	gtcttgcatc	tattctccct	tccttgtgtt	cttcctttgg	10980
acagagttgg	ttgcaaactc	tttgctgtca	atgtgcaggg	ttgttttgtc	cccacgggtc	11040
aacttaggtt	atcctgtgtc	ctgtctaaca	cctcagtgga	ctctattttt	ggttcagcat	11100
cttcctattt	ggttttcagt	agtcactgaa	agtgctggca	aacagttaac	agtgtcttta	11160
gtaggaatgg	ttatctaagg	gaccatacta	ggtaaagggc	tgagatactt	catatacata	11220
gcataccctg	actgctgtaa	agatagaaaa	acagactgag	atgccctaca	cagtctgtgt	11280
ctgtataagc	tacacacttt	ctgtaatggc	caacatcaat	ttatctttat	cccatagagg	11340
gcctggcttg	gagcatgtgt	tccagggact	gaatcatttg	aggtaggagt	gaatactttt	11400
ctttctatcc	tcttgcattc	ttccagtaaa	attaaagctt	atcgctatca	tgtatgttcc	11460
caagcaatgt	ttaattatct	gtaaaaagct	ttgtatctga	gactgcatgg	attacagatg	11520
ggaaaggaaa	aaaaagtgtt	tatttccaca	gtgtctcact	tccaagaatg	gggtgagcta	11580
ttgacaaacc	atcacacgaa	gacattttt	tttaaagatt	tatttattta	ttatatgtaa	11640
gtacactgta	gttgtcttca	gatacaccag	aatagggcat	cagatctcat	tacgggtggt	11700
tgtgagccac	catgtggttg	ctgggatttg	aacttcggac	cttcggaaga	gcagtcgggt	11760
gctcttaccc	actgagccat	ctcaccagcc	ccgacattat	ttttttgtt	gcagccactc	11820
ataaatggga	gaagaatgtt	gaaaggaaaa	gaaaatgtag	gggctggaga	gatggctcca	11880
tggttaatag	cactgactgc	tcttaccgag	gtcctgagtt	caattcccag	caaccacatg	11940
gtggttcaca	accatctgtt	acaggatctg	atgccctcct	ctggtgtgtc	tgaacacagc	12000
aagtgtgtgc	tcacataaaa	taaataaatc	ttaaaataga	aaaaagaaaa	gaaaatgcag	12060
aaaaataata	tgaagtctaa	aagttcacag	cgaaagaggc	attttctgca	aagttcccaa	12120
gcaagtgact	ccatgctgtt	tgttgatcag	cattgtgagc	cctcgtgttt	aacattgagc	12180
taccccatac	tccacaagcc	caacgctcct	tcagtgacat	atgcagcagc	tgcatcatca	12240
ttgcccatga	tctagattct	aagctctagg	tgtggtggtt	tgaataagga	tggctcccat	12300
agactcatgc	cagggaatgg	cattaggagc	tgtggcctcg	tgggaggaag	tatgtcactg	12360
		aagttagtac				12420
		atgtggactt				12480
		tggtaagacc				12540
J J	JJ		Page	19		

. .

PCT - Sequence listing for submission.txt.TXT

tatggggtac	acaggtttta	gaggagaaga	attgtaggcc	tagatttttc	aaaccctact	12600
tttaataagg	gttcttaaac	gctttatcct	ctcttctagc	ccaccaccca	ccagagggag	12660
tggaaaggaa	aggttaatag	agcaaaggag	ggtgtggatc	tgtttagaaa	aagttctttg	12720
gagcaaatcc	aatctgtgtt	accaggatat	cagcagtaca	gttcactcag	aacagcagca	12780
gcagctcgat	ccacttgcaa	acaccattca	tgaatcagca	atggcaggtc	aatccagaag	12840
aaacctcgag	gctctgccaa	gtacaaggaa	gcagcagcaa	gaagctgcca	gaaagaacac	12900
caccagaagt	tcttttgtgg	catttctgtc	tatgaagtca	tatcaaatga	tgactagcaa	12960
agaatggcaa	ggcaaggtgc	tggtgagatg	gcttagcagg	taagagcact	gactgctctt	13020
cccaaggtac	tgagttcaaa	tcccagcaac	cacatggtgg	cttacaacca	tcgtaatgag	13080
atctgatgcc	ctcttctggt	gtgtctcaag	tcaactacag	tgtacttatg	tataataata	13140
ataaataaat	taaaaaaaaa	aagaatggca	aaccaaacca	tacagcttca	tcagcgaaga	13200
ccagtgtcag	caaaacccaa	tgataaccag	caaatatata	tatcctttcc	aaacatcaca	13260
ttcttgttct	ctcaagtgtc	agctttagca	aaacatcaca	tgccctttgc	ctagactgct	13320
tctagaaaac	caccgtgtat	ctgttctcag	caaaacatcc	tcccacatgt	ctgcttcagc	13380
aaaaacatcc	tctcataaga	cagtttccag	aaaaacatca	catgacatga	ctgcatctcc	13440
aaagaagcca	gaaatttcca	attcaaagag	tactagtatg	caacctagag	accattcttg	13500
tgatattttg	acaaagatca	tgggtacatt	ctgctcttgt	catgcacaca	gacacacaaa	13560
tctgcctgag	gttaaataga	agagttatga	atgaacatct	ttagaagatt	tgtctctaag	13620
agatttccaa	aaagtttagt	attgactttg	ttgcttggtt	attagtgacc	atacttatgc	13680
agatctgtaa	cgaagaggac	caagctaaac	aaggaacata	cagaatgtac	agtttgagga	13740
gaaaaggagc	ccagggaagt	gtaatggagt	caagtccagt	gcttgaggag	ataaacctga	13800
tgttaaatgg	aaaggagaag	tggtgacctc	aagccaggac	tccacctagc	taagcttcca	13860
acttctgaga	agtaatcaaa	gaaaagttta	gaactgggtg	tagctgaatt	accttgaatg	13920
ttagcagcac	tcatgagaca	gaggcagcag	gcaggtcact	gagttcaagg	ccagcctggt	13980
gtacagatgg	ggttccagga	cagccaagct	taggcagtga	aggaaaccac	tgaaaacaga	14040
aagctggtga	agatggattt	gaatgaagag	gcacattcca	ggcccagcag	cagcagaact	14100
tggtagcttt	ggccatattg	ctctggcttt	agagtggagg	gtacaaaaaa	aagagttatg	14160
gaatctccct	ccgtgactaa	ggaaagctga	tggggccagg	tgtgtgtcag	ggatgtttct	14220
gcatggagac	ccagagacct	ttgcttaaag	ttgtgcaggt	aaaaacctgg	attgttgtga	14280
tagtttgaat	gcttggccac	agggagtggc	actattggga	ggtgtggcct	tattgaacga	14340
agcgtggcct	tgttagagga	agtgtgtcac	tgtggaggca	ggactttgaa	gtcatatatg	14400

	PC	T - Sequenc	e listing f	or submissi	on.txt.TXT	
ctcaagctct	gttcagtgtg	acatacattc	tccttctgat	gcctccagat	caatatgtaa	14460
aactctcagc	tcctccagca	caatgtctcc	ttggatgctg	ccatccttcc	cgccatgatg	14520
ataatggagt	gaacctctga	aactgtaagt	cagccccaat	taaatgttat	gagttgccat	14580
ggtcatggtg	tctattcaca	gtgatggaaa	acctaactca	gacgattgcc	ccagaaagcc	14640
cccaagatgt	tggatatgcc	agagtcatgg	gatttgtgaa	gagggatgct	gttaacaggg	14700
agtggaactg	gcccaagaga	aataact <u>g</u> tg	ttgcagtcaa	caaagttgaa	aagagttgga	14760
gatctgaaga	ctgctttgac	atcaggcacg	gagatgcaga	gtttggagtt	tacacagctg	14820
ttttttggtc	ttgcttttgt	ccagtatttc	ccctttcctc	ccttttggga	tggtgataga	14880
tatcctgtat	atgttggaag	tatgtgatct	tgattttgat	tttattccag	atcatagtta	14940
agagcttgcc	ataagtctta	gaacagactt	tggactttta	agcagggtta	agactgatag	15000
actatggaga	cttttgaggt	aggattgagt	gcatttctgg	attatgataa	agctacaagt	15060
ctgtggggac	tgggatgtag	aatgtggtgg	cttgaaaaag	aatggccccc	acagacacat	15120
acttgaatgt	ttaaggggta	tcattagaag	gtgtggcctt	gttggagtag	gtgtggcttt	15180
attagaggaa	gtatattatt	gggtttgggg	ggtggtgagc	tttgggtttt	gtctttgtgt	15240
atgcctgtat	gaggaggtca	gatcttttga	gactggagtt	acaggcaatt	gtaagctgcc	15300
atatgggtac	tgggaattga	acccaggtcc	tctggaaaag	cagccagttc	tcttaaccac	15360
tgagccatct	cttcagtccc	gttccaatga	atttttgaga	agcttttcta	gaagtgcctg	15420
aacccagaga	gacaataaaa	acagttgttc	tcaacctgtg	agttgagaca	cctttggggg	15480
ttgcatatca	gatatttatt	tacattgatt	cacaacaatt	gtaaaacttt	cagttttgaa	15540
gtcgcaatga	aataatttta	tggttggggg	tgtcattaca	acatgaagaa	ctgtattaaa	15600
gggtcacagc	attaggcagg	ttgagaatca	ctgcaacaaa	agaagaattt	tgtgccaggt	15660
ggtagtgcca	tgtgtcttta	atcccagcac	tcaggaggca	gaggcaggca	gatctctgag	15720
ttcgaggcca	gcctggtctt	tagagtgagt	tccaggacag	ccaaggctat	acagagaaac	15780
cttgtctcaa	aaacaaaca	aaacaaacaa	acaaaaataa	ggtatttgta	aaacataccc	15840
tagatccgtt	gtgctaagac	ataacagcat	tccaaatata	catagcccaa	gtagccaagg	15900
ggttagagct	cttatcagct	ttgatgagct	tgatataagg	ggaatttccc	tttatcccca	15960
aagatgaagt	ggtcttaacc	ttcttgcatg	ctgtttgctt	gttagttaat	aggtttattt	16020
ttattttatg	tatgtgtgtg	ttttgcctga	atatatgctg	tgtaccttaa	gtgtacttag	16080
tacatgagga	gtccagaaga	gggcgccaca	tcccacagaa	ctggagttac	agatggttgt	16140
gagctgctgt	gtgggtgcta	ggaatcaaac	ctgggtcctc	cagtgctctt	aactgatgag	16200
ccatctctcc	agccccttcc	atgattcttt	aaaaagcagt	catagtgaag	agagtacaag	16260
gttgtgcatc	aggacagtaa	cacccccaat		aacaagtcag	agtaagatga	16320
			Page	4 1		

PCT - Sequence listing for submission.txt.TXT

cagatette aaagggacae cagcaactgt ctgggccctt cctgtaggte cccctaaact 16380 16440 tcactttagt ctggagaaat tccagggctc tcagattact ccagagagct agaaagagaa gcttttcttg tctcgttttc cgtttgtgtt tataacataa acttttattt atttatttat 16500 16560 ttatttattt atttatttat tatatgtaag tacactgtag ctgtcttcag acactccaga 16620 agagggagtc agatctcgtt acggatggtt gggagccacc atgtggttgc tgggatttga 16680 actcgggacc tttggaagag cagtcaggtg ctcttaccca ctgagccatc tcaccagccc 16740 tataacataa acttttaatt tcactgggaa gacattcaag cagaggtccc aagttctatc 16800 actcagaaca catatacaga tctggacata ttgacatgca catgaaatgc aatggagata 16860 gagagacaga aggatccctg gtacttgctg gccacccaga ctggtagaac cagcaggctc 16920 caggtagctt cccaaccatt tctccatctt tgggtccatt gttgcctgtc tgaatatctt tgcagatagt ttttagaggg gaaatacagc aagtaagcag aatggtgcag ggtagagcct 16980 17040 gcacctggaa agtggagaaa catcctagag agacacagcc ttgcaaggct ggtccagggt 17100 gtgggcagtg tacagctgtg actgcagatg tcagcacaga tgctgggtac ctgattcatg gcaaccacag gttgggaggg cccctacaga tgttggagcc ccaggtctga caatcccagt 17160 17220 ggggtgattt gtgacgtttg taataagatc agatgtgagg gtagaggtga gagagagggc 17280 ccaggtagcc ttctagacct gtctttggaa tctgagttca gactggacat tttgggggct catttccaga gtcactctcc tgtgctctgc tcccatattc atgagaagag cactcccatg 17340 17400 ctggcagaac atgaggccca ggaagaagac atggggctct ccataactca accccagaga 17460 cctagtgcca agcaattatt gctcatagca gccaaaaaca tgtaagaaac tgccccattc 17520 tggcgaaaga gtaagatgca tttgactgtg actgtcaccc attgtcagga ggccaaagca 17580 tttctttagc agctcctcga gtcaatgaaa tactgagtgt actgaggacg agggcagctg 17640 atgtcctttc tcatctgtgg tctcagtgaa cagaggtcaa ccaggatcca aaaagcagta 17700 ttatgtggaa actcccagaa agaaaccaga aaggagtttg atggtcacga gactggacac 17760 actgccagag tcgcgtggct agcgtcagca aaagttttca agtgacttcc acggaagcat 17820 atttacgacg acgtacagaa gaagggcagc tacttaacag atgcccacct accttttaga 17880 acagctaata agtcacagat gcctgcggta ctcccagaac agaggggcct tagtagtcag gcctcacaca ggaggcagga agaaaagcat gcaggaatca aaccatagcc taaagtataa 17940 18000 gatgaacatc caggagccta aaccactcta aagaaaatta catagatcct ctatgtaaat 18060 taaggagcag gagagtgagc tttaagttgt ttctgcaggt gcataaatta tgcaggcact tcaggcccta tggagaactt aaccctcctc ctcagatgct ggctgcacgc ggacttcctg 18120 ccacaggacc cctgctatga agtgagtgca ggaaagaacg ttttatagtg aagatgcctg 18180

			. 1:			
agagacttcc	aggccaggtg	T - Sequenc atccaagtca	e listing f acacctacag	tgacaagtct	tgttgatggt	18240
ttgtaccctt	gaaatattat	catgagaagg	gcactctatg	cctctagagt	cttctgcccc	18300
caaccctaaa	gcccagtctg	atctgagacg	agaaggagac	agattccagg	gaaggcacac	18360
gctctacagt	gtctggccag	tgttccatag	aaccggcaaa	gtcattaaac	acaagaaaga	18420
actgtaggag	atggaacaat	gtgttgtgat	gacctagatg	gaccttaaag	gactgctctg	18480
tgtgtgtgtg	taactaagga	acctgggtaa	acgatgcggt	ccttaccact	cttctatcca	18540
ttaaaatgtt	tatcatgtct	cttcgtggtg	gtgcacgcct	tttaatccca	gcactcagga	18600
agcagagaca	agaggatctc	tgagtttgag	gccagcctgg	tctctagagt	tcagggctac	18660
acagaaagac	cctgccttga	aaccaaccaa	ccaaccaacc	aaccaatgaa	ccacccataa	18720
cccacagatt	tttgttgggt	gtgcttttgt	tggaacctcc	ctctcttttc	tcagttttaa	18780
gactccagaa	ccgaagtgag	aacagctggg	catgttactg	tgtgcttggg	atcccagcaa	18840
tggggaagag	gagacaagac	tttcctggca	cttattggta	agctagccta	acttacccta	18900
ggtgagctcc	gggccagtga	gagactctgt	attaaaaaaa	aaaaaagtgg	atgttaaaag	18960
acacctaagg	ttgtcctctg	gcctccacat	gcatgtacag	acatatgcac	acatgtgtgt	19020
gcacacatga	ctgtttcctc	ttgtttatca	cctgtcctta	tgatttgaga	gaactgtagt	19080
aggctttcag	atacagaagt	ggattggctt	ggttaaaaat	cttagttcca	ctactggcct	19140
gtgtaaaaga	tggggaatct	ctgctgagct	aagccatgca	ctatgagaac	agtctctctc	19200
caggccagac	ctctacaaaa	aaaatcccaa	caacaacaac	aacaacacca	ccaccaacaa	19260
cacctttgca	ggaaggtgtt	ggtaaaggcc	ctagtttaaa	aatggtgtta	catatacaca	19320
ccatgaagtt	cagagagtcc	attcgcaaca	ttatttgacc	ttcagcacga	tttgtttctg	19380
gaactttccc	accccattct	tgcctcgttc	ccccaggtcc	tggtgactgt	tattattttg	19440
tatccatact	gttgcacagc	aagtgtctag	aactttctga	atctgcagaa	cagactcgct	19500
actgatttaa	ccatggcctc	ccctcccca	cccttcccct	ccccttggct	tctgctgacc	19560
accactctac	ttcccatctc	tccctcgttg	gctgttagct	acttagtgga	agtggaacca	19620
tattgacttt	tgtgactggc	ttacttggct	tagtataatg	ttttcaaggt	tcaaccatgt	19680
cattgagtgc	accagtacat	tcctaaaacc	ctggcactca	ggaggctaag	gtaggggaac	19740
ccagaccaat	ggttttcaac	cttcctcgtg	ttgcggtgac	cccacaacc	atatttctgt	19800
tcttacttca	tagcagtaat	tttgctaatg	ctatggatca	tagtacaaat	atttttggag	19860
atagaggttt	gccaaagggg	gtctcaatcc	acaggttaag	aacttctgat	ttagactttt	19920
agttcaggcc	aaattacaca	gtgagagcct	atctctttca	tttcctaatt	tgaaagaaag	19980
aaagagggag	ggagggaggg	agggaggggg	ggggaaggga	gggagggaag	ggagggaggg	20040
aagggaggga	gggaagggag	ggagggaagg	gagagagaga Page	gagagaaaga 23	gagagagaga	20100

PCT - Sequence listing for submission.txt.TXT gaaagaaaga gagaaagaaa gggagaaaga gagaaaaggc taggcgtgat gcagctcact 20160 gcagctctgt gagacgcagg caggtccatg gtcttcccac ttcagccgcc tagtgaattt 20220 gaggccagcc tgagagataa gagaccctgc ctttaaaaaa caaaatagac aatcagctta 20280 gtgggtaaaa gtgtttgtga ccaaagctgc caacctgtgc tggatcccca gaacccacat 20340 20400 ggtggaagga gaaaaccagt tcctgcaagc cctccacgtt gtgagccatg gcatgcaggc 20460 atcctcagac agacagacag acagacaaaa tgaataagta cattaacatg tttaaattaa 20520 20580 gtattagaga caaggtttct ctgtgtagct ctgactgtcc tgaaacttgc tctagggatg 20640 20700 aaatgcatgc accccctcc cccagctgaa actgacagtc tgattcccta ttgtgcttgt gtttcttacc agttcatcct ctgctggaca cttggatggc atcttctatg ccactgtgaa 20760 20820 cagagctgca agctttcatt ttggggggtat atactcagaa gtggggggtac tgggtcatat 20880 gaccagtcag agattgttta gtaactacca agttctctac atatttagaa atactatttc 20940 tcctccttct tccttccttc cttccttctt tccttccttc ctttctttct ttctttcttt 21000 tctttcttt ctttctttct ttctttcttt ctttctttct ttctccttcc tttctccctt 21060 21120 21180 21240 ttctcctcct cctcctcc ctcctcctcc tcctccttct tttaagcttt atgtgtacag 21300 21360 gtgttttgtc tacatgtata tcttgcacac cagaaaaagg cactggattc catgggacta cagttacaga cttgggaggc atgggggtgc tggtctttga actcaggtcc tctggaagaa 21420 cagtgctctt aaccactgag ttaactctct ggctccaata tttcatctct ctctctct 21480 21540 cttcctctct ttcttttta tttttattt ttctacttat tttcaatagc agccacctcc 21600 21660 acagatacaa agttctctga ataggccata aaaatctgag cttactcttg agtaatatgt ggtgaatgga cggcagagca tggccttctg tcttgcttgg tcctcacaca ggacacaggt 21720 21780 cctcagacag gcccaggacc ctagagctcc tttgggggag gggacacagt ggtgctatga 21840 aagcctgtct tcttctactt actctcagtt cattataaag catttcaacc tgttaatggg 21900 ttccagggtc atactattct gccttaatta aactaatccc cacattatga tcaagaaatc ccataaaaat gatctgtaac aacatcacac ataggagata aaatgaatta atgtgaatca 21960

DOT COMMAND listing for submission but TVT	
PCT - Sequence listing for submission.txt.TXT cacggaaatg aggaatgaca attcctgtga ccctcccaga ggcccttatc aaccatagga	22020
aaaaaaaag agctgacatg ttgatccaaa tagaggaaag aattaggaaa agcagttaag	22080
gaaagaaaga ggcccttaca gatttacatc tgcccgataa agcccactcc aaagcaggag	22140
tcttgcatga gtgccatgta ccctaactac agagcagcag gggagagatg ctgaagtgtg	22200
cactgtgccc tgtgtcatcc agtcagtggt caggcatgcc acgtcaaaca tttttattaa	22260
cggggcacat gatcagaaat atttggagac agtgactgga tagagagtcc ctgtcattca	22320
tcctggatct tccaggcaag actgacacat cagtttggaa gaatcacata acagatactg	22380
gaagagggcg ctggcaagca gcctatgtgg aggatagaac ttgacagcac tcaggcagag	22440
tcacctttaa ccaacacctc aggatttctt cccaagctcc cctctgtatc tcttttgacg	22500
ctgcttcctg aaatgtcttc cctctaattg tgtccctgtg gactttggct gtcccctgtg	22560
taggatgggt ttggtatcga ctgttctcga ggctgcgggg aggagatact tagcagagtg	22620
ccaagagtcc tccaggggca gcctcggatg atgaccggac tattcattaa ctcagaaaaa	22680
aatggtgcct ggaagcatct taccaagtgt agttgttctg cgctcagggt atgctcgggg	22740
tatgtagttg ttctgctggt atgcttccct tctcagagga gttcagttct catggtcttt	22800
gtaacgtcag tgttacattg ttttaatggc tacatcattg ccaccaatgg ctagcctctc	22860
ctctgtctac cagccctttc ctttctcttc ttcagtgctg ggctggaacc caagactttg	22920
ctcatgctag actaggcaag ctactcagcc ccagccttgt tcatggcact gagtgcttcc	22980
atatgcccgg tgagctctcc caggtctggc tttcattgct ctcttcacaa gcctggatgg	23040
tgttggatac ctgatggccc ccgggtctct tctctccctt cagggcaagg ggaacatgtg	23100
atctctctct ctctctctt ctctctctt ctctctctt ctctccctt ccctctccct	23160
ctccctctcc ctctccctct ccctctctca ttgttactcc tgcttgtgga gccaagcaaa	23220
gaaaatgacc actgaacagt gaccacgtga caagttgggg aaagataagt agaaaagggg	23280
gcgagaagag gggaagggaa ggagaggtaa gaactatgca aagaaaggaa gaaaaggaag	23340
agaaagggga gggggagaga aaggaagcag ggaggaggac ctctgtacac ctccaaacta	23400
acccttcaag atccaaagag catcttcttc cctgtggccc tccagcggcc cggccttgct	23460
caactctcac agcaaccctg agcggagtgc ttgggtctgc attgcaccgg tggggaagcc	23520
gaggcctggg aggttccaac ctttgtctag aagcacctca tcctccgaga agatcagcac	23580
tgacagagag gtcacccacc tgcctctgag ggccacctcc ccagagccca gagaaggatc	23640
ttacctggga tctgtgggcg gccatctaac ccagaaggca tgggggtgcc tggaaatgcc	23700
aggaaaggaa gtcaggaaca gctcaggcag aaatgaaggc acaaaatggg ccccacattc	23760
ctggctgaac tgggatcaag agtgagcaca agcttctaag atctcaggct ttcttccttc	23820
caacctatct gctacttggc ctggaaggag gatgcccaca gccttccctg cctcacctag Page 25	23880

PCT - Sequence listing for submission.txt.TXT 23940 24000 cctttcttgt ccccctccc aacaacaaca acaaatccat ggcttttgtt tctaaaatta 24060 24120 tatccgcaca ataacctctc tgccaattcc aggcacacag agccaatgga ccagctccct ttggataatt caaattgacc ccaagatagc cctaccccac ttgtacctcc tccctttgtt 24180 24240 taagaggttg ctctaagctc tttgtttcct gaccgaaatc cttccatggc ttcctattat 24300 cccagagaag tccacacctg actaagcatt ccacccagcg tctgcagcct tctcaagttt 24360 caatccccat ccttcctggg gtggagtgtc cctgttgtac ctttggtaga gatgactagg gactcatcag attacaccag gacagttgat gtttggatta gcagcagggg tgtgaggcta 24420 24480 gatgcttatt tgccttgtgg catgcaggac acctgtcagc tgcggagaac ggctcgccat 24540 accaatttcc cgaagggcct cgggctcttg tgcttccttc tgctatgatg ctagcctcgg 24600 ctgctgccac gtgtgttccc agcctcctgc tctggcccat cttcatctgt ccacagacct 24660 cagtgttgca aacatggctt cttcagatat gtctccctag ggtgcccccg cttcaggaag tacggctgag agagccatgg ctctttggtt cctggtcact ttgagttcct ccataccagg 24720 24780 agggatgggt tggagctcag agaagaccct gggcatacag tcttgggtgc ctttgtgtcc 24840 aggcaactaa ggcacctcac ccgctatatt ttgcaggaac tttctaagct gggcttaggg 24900 gtggacactg acatagaact tcgaactctg cagctgcctg tggattacag ggaggtaaaa 24960 cggaggctta ccacaatctg ggaagatttt caaccacaag taagtgatac ctggagaggc 25020 tgtgggtctg ggaacctgat gatgggccca gggcctagga actttctgga ccttgatcta 25080 gatttgaagg ctggagtaca cctgaattaa agcttctgtc gtgagattct gggtctgtgt 25140 ataagtttat gctgaaacac gaggtagata gtaaaagatg actgggggca agtgggccgg 25200 acaaaatggg aatctggtat taaagccagg aggactctag gatagctcac acctatccta 25260 aaaaaagaga ggccctggat taagccctgt gtatggctaa ttctggctgt tctgaggaat 25320 ttaaggtaaa gcgctttggg cctaggaagg tctgatgatg attcacccag ggttggtcca 25380 ccttcaaaac atcctgccag gggcctggtg tgatggctca cacttttaat cctggcacct 25440 gtgagtttaa ggccagcctg gtctagttta tgagttcaca gccccattcc aaactaacaa 25500 aagtaactac atagtaactg aatataagca ctgtgtaaac aggggcacaa tgccaggtgt 25560 ggtagctcac gcctttaatc ccagcacttg ggaggcagag gcaggtggat ttctgagttc 25620 aaggccagcc tggtctacag agtgagttcc aggatagcca ggactacaca gagaaaccct 25680 gtcttaaaaa acaaaaaaca aaaaaaccaa aaaaacaaaa caaaacaaaa aaaggacact gaccaaacac tgcagcaaaa tcctctgcaa ctgttttcaa aagaggacaa ataaagtcta

	PC	T - Sequenc	e listing f	or submissi	on.txt.TXT	25000
		tgctagcttc				25800
		ccagggtcat				25860
ggggaaagag	agcacacaac	ctcggatgag	ccatttgaaa	tacaaaagtc	ctttttaatc	25920
cagaaaaaat	ggggaaaagt	ccttaaatgc	agatgtagca	tgcctaattc	aacccaaaga	25980
tgtgttcctt	ttgtatcagc	accattactt	aggggcctaa	gcagggctcc	tggaggactt	26040
ggagctagat	ctgtttagcg	gggctctgtc	atcactggac	ctctcttcac	atctagtgat	26100
ctggtgtctg	tcctgggatt	tctgatatgt	atgtccctac	agcttgttgt	gcatgtgggc	26160
atggactctt	ctgccaaggc	catctttctg	gaacagtgtg	gtaagaaccg	aggctatcgg	26220
gattcagatg	taagaggctt	ccagccggag	gatggagtgt	gcctccccgg	tggccccgaa	26280
gtgaggctgt	ctgttgtcaa	catgaaggag	gtctgccggc	gtgtggctgt	tgagaatgtc	26340
gaagtggcct	tttcccgaga	tgcgggcagg	tacttcagga	ctccgtgtgc	caagtgccaa	26400
acagatggga	gagagggatt	atccttcaga	gtcccttctc	tctcctcaag	aggctatcct	26460
atgttgtcca	tgtggctgct	ttggtcacag	gcatcctatt	tgtcacaggc	actgcagatt	26520
aatttaacct	cttctccaaa	cgctgacagc	ccctcccct	aagcaccttt	cctctcttct	26580
agggataaag	aaatacccga	ggggagttgg	cagtaaggga	gtcattgtgg	tgaaggtgtc	26640
ttaccactag	ttgtttgaaa	ggccggctca	attctgtcat	gaccgcttgc	tggtcattag	26700
actctgagcc	caagaaccaa	tgtctgtctg	gagtgttctt	aggccatgtc	ctttctctat	26760
cagaagagcc	aaactcaagt	ggtactaggc	atgtgggcat	ccataaactc	atgcttcatg	26820
aaacctgtac	ttactgtgtc	tggcatcgac	aagatctggg	agtaatgggg	agtttcatgt	26880
ggttgcaggt	acatctgcga	ttacacctac	tacctgtctc	tgcaccttgg	gactgggcat	26940
gcggctctca	tccatgtccc	tcctctgtcg	cactggctct	cggccagcct	tctgggcaaa	27000
gccttgcgag	tcatcatcca	agaaatgctg	gaagaaatcg	ggaaagtcca	gactcaaagt	27060
acagcagctt	aagggaagca	gcagggggat	gccttcctta	gatgaaatgg	agtgtttcag	27120
gcttggacgg	agaagccagc	tgtgctatga	gaggctctaa	aaaagggaaa	cagttacaag	27180
gctgggggtg	ggggtggggg	tgggggtgtg	gactcacaga	atcacaatct	tactttagtg	27240
tctaaagcaa	gaagaaaatc	cccaaaggcg	gatgcttcat	aaaggattaa	ctaggggaag	27300
ttatgacctt	tgtaactcca	aagagccacc	aaaacctagt	gtcaagacca	aatgaactga	27360
ataactctca	agtgttcttt	gaaaaagatt	ttatttattt	gtttgtttgt	ttgtttgttt	27420
atttattata	caatgttctc	cctgcatgta	tgcctgcatg	ccagcccagg	gcaccagatc	27480
tgattataaa	tggttatgaa	ccaccatgtg	gttgctggga	atcgaactca	ggacctctta	27540
agctctcagt	catcttccct	gctttgtttt	gttttatttt	gagacagggt	ttctctgtgt	27600
agccccgcct	ggctgtcctg	gaactcacag	aaatctgccg Page	gattctgcaa 27	gaaaatgact	27660

PCT - Sequence listing for submission.txt.TXT ttacaagatt tcctttgcaa ataaaccaag gacattttac atatgacaga gccaagccac 27720 actaaggcag atcaaagccc aaggtggaag ccgggcgtgg tggcacacac ctttaatccc 27780 27840 agcactcagg aggcagaggc aggcagattt ctgagttcca ggacagcctg gtctacaaag 27900 tgagtgccag gacagccagg gctacacaga gaaaccctgt ctcgaaaaaa acaaaaaaac 27960 aaacaaaaaa agcccaaggt ggactgggat ggcacaggcc accagcacag aacctagctg 28020 cttggctggt gccttggctg gagacccctc tctgtgagca aagagctcct gctccaaacc 28080 ttaggtccct ttgttccagg agtgggctct agtgacactt caggtcactt ggcacctggt 28140 cagacacatt aaaagaaaac gccgggcata cgcctttaaa cccagcactt gggaggcaga 28200 ggcaggtgga tttctgagct caaggccagg gctacacaga gaaactctgt ttcaaaaaac 28260 agaggcccag accccaaccc ccatgagcag ctcttccacc ccctctgcgc ctctccagtt tctcaagacc ctaagcgccc atttgcattg tattttttgt aaatagcttg gcatccccg 28320 28380 acaatacaca ctgcatcctg ttcagtcaca gctgatagtg ggtggtttgt atgcttgcga 28440 gccagtgtag aacactgttt ttttgctggt catttaatgg ttgggaggtc tgaagcatgg ctctgtgttc atctataaac ccgactaata aaaagtcctg gttctgacta cccagagaat 28500 28560 gtgtcaccaa caacacacca gccaaaaaaa ggaaagaaaa aaaagaaaaa ggtgtagtat 28620 ggtgaggtgg gtgggcagca gtatattatg aatctagcta gtaagcaggt gtttaaaaaa 28680 28740 acgaataata aattaattct agaacgctcg taataggtga cttagctggg caggggtggc 28800 acatgccttt aatgacaaag ctccgtagga aggcaggtgg ctctctaagc tctaggacag 28860 cctggtctac agagcaagtt ccaggtcagc cagggctaca cagagaaacg atatttcaga 28920 28980 gacttaattt tatgtgtatt agtgtaaagg tatctcaccc ttagatctgg atcccttgga 29040 actggagtta caattgtaag ctgccatgta ggtgctggga attgaaccct ggtcttttgg gagagcacac gtgctcttaa cctctgagca atctctcgat tcctaatagt cttttaaagg 29100 29160 tctagtacct ggctggagag atggctcagt gatttaagag tgccgactgc tcttccgaag 29220 atcccgagtt caccgagttc aaatcccagc agccacatgg tggctcacaa ccatccgtaa gaaatctgat gccctcttct ggggtgtcct aagacagcta cagtgtactt acatataata 29280 29340 aataaatctt aaaaaaaaaa aaaaaaaaaa agtctagtac cttcatcctt aaaagcagct 29400 ggctccggcc aggcaggttt ttggtaaact ggaggcatag taccaatcca ggatagcaca gaaataagac cttcagcgtc atctagtgaa gctccctggg catctggtaa acaaaacccc 29460 29520 cggggcagga cgagattgga aggtgtgctc ttccaacgac cttttgacta taaatccaaa

			7	Same and and a set		
tacccattgg				or submissi gagttgcctc		29580
ctgccaccta	tgtctcatcg	atcagttctt	cacccggtgt	cctgattttg	tcactgagtt	29640
ccccattct	cagtgttcag	tgaggcggct	acctactctc	ccaggagtct	agaatgtatg	29700
gcttggttga	ttttccaacc	caaaccattc	atcaccttcc	catggcaaag	atggagagcc	29760
agcatctcag	agttacctgt	gggcaaccta	acgactcagc	accttgcagc	caggaacagc	29820
ccgattttcc	ttggttctct	ctccagcacc	ctcaggcacc	ccaactgtga	agcactacca	29880
aggacaggaa	aatgcacgca	gcacgcaagt	ttctggcaac	cccgccccac	ccccagactc	29940
acacatacca	aagccaccct	ggccttttgt	caacccaagg	tccaggggcc	aagcctgtga	30000
agcagccctg	agacttgtgc	ttcatgcctc	ctgattttcc	tctagctgag	taagtgaggg	30060
gaaagtagct	tcttcaaact	caacagcaat	ttgcatttgg	agaaacccgg	ctgtcagttc	30120
tcgtgctgag	cattcccgag	tgacacacac	acacacacac	acacacacac	acacacacac	30180
acacacacac	acacgaggct	cagcttcccg	gctgtcagtt	ctcgtgctga	gcattcctga	30240
gtgacacaca	cacacacaca	cacacacaca	cacgaggctt	agcttcccga	ggaagtgggg	30300
gatggttcca	gagtgaagag	gaaaccaact	gggagacaaa	ggtgcataca	gaattctttt	30360
atttaactta	atccatgtgg	tactttaact	actagaaaaa	agcagagtaa	tagactcaag	30420
tggccttagc	tttagccatt	caaaatagac	aaagtttctt	ttttcataat	gtaaagaatc	30480
ccgagtatgt	cgcagtaaca	ggaataaatt	cttacaacag	aatatacaaa	aacattgaat	30540
ttttttcat	ctactgattt	tcttttatat	ataaacagag	ggttttttt	tttaggaata	30600
atttatacac	agaaagttat	tttatgtaac	aaattggcca	tattattatc	ttttttagac	30660
ttttttttc	tttttttaag	aaaaaattta	acaagaaaac	tcagaaatgc	attattggcg	30720
atgtgtccgc	tccatcgagc	cttttgactt	ttgttttgtt	tttttaaatc	ccagaggtag	30780
atgaactctg	gcaaaactct	tacttcaacc	tcactggcat	aggaagcaga	caggggttgt	30840
caccaggcag	gcacctactc	cacctgtaca	tgtgtctgca	cactgcccaa	cacccacaag	30900
aaactgaaag	accaaaccaa	acccacaaat	ggttcccaga	cctttttcct	gcagtgttag	30960
aaagttccat	gtgttttcaa	caacggtatc	ttgtggaacc	agagagacat	ggccaataat	31020
gcacggggag	ccaaaggaca	tggatcttaa	tttgaaaaaa	gggggcgagg	ggacacacat	31080
tgtggttttt	gttaccagtt	tgttctgtat	tagaaaacaa	tggaccttcg	gcgttcgcca	31140
ttagatacag	gtaggcacag	cattcgttag	gatctgaggc	acatgtgccc	acgggctgca	31200
catcagagtc	atgtgatcac	tgtgaagcca	ttccagtgtc	ctgaaaccct	cccatctcca	31260
tagtgttgca	gagctaggac	cagccatacc	agccagatgt	caccatggag	tgccatctct	31320
ttgctgggtg	gccacacact	gctatttcca	tggccagcag	ttctttccat	ctgtttgggc	31380
tgctacactc	cacagggaac	agtgagtccc	agataattcc Page	tttccccagc 29	aaagggttcc	31440

PCT - Sequence listing for submission.txt.TXT 31500 aagatcaaga tactgaagaa tacagaagta ctttttaaac cactggcatt ccttttgttt tgttttatt tttatctgtt ttatttttt ttgttttatt tatttattat ttatttttt 31560 31620 acaaactaga gcagaaagca tgtgggaaag agggtgaacc acaattggtc ctggggagaa 31680 tttcttttta attaattttt ttaagttttt attttttatt tttggcatat tgtaaagcta gctagtaaac aagtgtcaaa aaagaaaaag gaaacaaaga gggggaaaaa agaccacaaa 31740 cacatatttt tgcacacaca gagagaaaaa aaaagtgttt ttaaattatt ttcggcaatt 31800 31860 ataaactaca aacattttat aaaattattc tatgttctta caaaaatgca atgaaacatt 31920 gaattagttc ttgtaaacca gagcttcgtc aacgactacc cgtaatctac tggacttaga 31980 agccctattg aaaggataat gagtaattta aagaatggtt tactggaaag atgcagacac 32040 aaatgtggac acacaaatca gtgattatga agttctcaca gaaaccaaaa tcaaatcaat ccctaacgtc atgccccaga ccgacaactc atctgatgag tgtgatggag tctgagtcct 32100 32160 tccgcacgtg acttagctct aaggagaagt ttccagagca ggatgccaag tgtcttatct 32220 gaaaccaaat gcccacagtt gactccccag cctccacatg ctctgacacc ttcagacacc atcaagtcca aatatggtcc atgcttcttc caggcccttt aaccctctgt cagcaattcc 32280 32340 cgtcatgtca cgatgccggt taccaagggt gcctactgca ccgtcactct gtcatcccat 32400 caaggaatgt tcgtttctct aaatcgccaa ctggtcatcc aagctggaag cccaaagcaa 32460 agacccctgg cctgtccaag gtctgtatct tcagcatctc tggcaagaga ggttcaattt 32520 tacacagaca tcctgtcttg aagttctcat ttgtaccacc acctagttca aagtggactg 32580 ttaaaagttt gaccatcatc actggttctt aaggggtgga tctctctggt ccaggtctcc 32640 caatgcagct gcttagccca ggaaatgaaa agacatcaga caaacataaa agtaacatta 32700 aaaacaaaaa ccaaagggaa aaaaaaaatc ccaaaccgta aattcattac tgctaaaatg 32760 ggccaaagca ttttgatgga gtggtcctgt ctcctcctgg atgccagtgt ttaggaaagg 32820 agatgctttc agcactctgt ggccactctc agaggaccca acgatgacaa cagagggcct 32880 tgggtaagca tcctagactc ctcacccaca tgagctcagt gtgaccttgc caccactgct 32940 tgcttacctc aggcacaggc actgccaaaa gaggtgggct gctaaggccg aggctccggg 33000 agctcaggct ggcttaggac ttggcatcat acagagctca tccatctgtc agcccaccct 33060 aaaaactcct gtataccact ccgccatctg ctcgtctcac cgtgatcgct tttctagttt 33120 atgaagctgc ttttcctacc gttgaacagt cccgagtcat aagaaacagg caggtaggaa 33180 aaagagcaac cttgaacagt cttttatatc tcaaggaggg agcctcatcc catctctgaa tccaatgtta ggacattcct gaaaggagat ggcgaagcgt gggccccacc cagctcaggt 33240 33300 tcagctctat ctccacgcct caggaagggc tgtgtggggg cacacctgga tgttcacgtc

acctgcatgc	PC tgtgcctcag	T - Sequenc tggttcatgt	e listing f gacttcaagc	or submissi agtgtgagct	on.txt.TXT cctatcagaa	33360
gggggggttg	ggtgggggtg	ggctcgagtg	aaaaaggcca	cgactcagct	tggtaggagt	33420
acttgaagct	tgtaaagaga	aaaatcagga	agaggcgggg	aacatcagca	tgagatcagg	33480
ctagaactgt	ggatatgatg	ccttgcaata	gtcggggcgc	gtcagtccag	cagaacgact	33540
gcaccctcgt	acaagccaac	cttttctttt	tattgaagtg	tttctggagc	attagtttat	33600
gacggccact	acgctgttgg	tgccgtctct	ctacttaaag	gaaaaaaaaa	aataacaccc	33660
acgcaaaaac	aaaacaccaa	caactcggac	agtttcaaaa	ataataataa	taaggaaaaa	33720
aaaaaaccct	taaaatcaat	tgaatgaact	gtagaaatcc	agttgtggaa	aaccggcagg	33780
tatgtgcgag	aggataggcc	actatcccag	agtgtcacct	acagtgtaga	agaaaaccct	33840
gatcaaacag	tatctcccag	tgaccctgtg	agcatctagg	aacccagaga	agggcagcat	33900
tccagcagga	ggcgaagggc	tcctgagctt	aaccgaactg	ttaggcagtt	tctccatact	33960
gggggaaaag	attagccacc	gcggtcccca	gctgaagtcc	ccagggcctg	taagagcagc	34020
tgctggagtt	gaggattgca	ctgtccacct	gtgagcagca	gacggatggg	tggacagagg	34080
cagagcacgg	ggaaggctag	gcgccaacca	ctggccttcc	agcctcaaga	tttggtcagt	34140
ccttgtttag	ccctgggggt	tgcgggggg	gggggggaag	ggagggaaga	agagggaagg	34200
acagcagcct	gcagggggca	caggcttcgt	cttgccccct	tttttatact	ggccttctgt	34260
cagaagcaga	agggggagct	ccctgaccgc	tgtacctcca	agaggaacca	atgccaggag	34320
agcaatggtg	gcatgcccct	gcctcggtgc	aggtctcaga	ggagcagctg	agggggctga	34380
cagggcaccc	tgacatgtgc	acacattggg	actctcaaga	caacctacgt	gtgggtgcct	34440
cctgccctca	aaacctggga	gtacctgctc	tcttagggat	agaatttgtc	agtcattcaa	34500
tctgtagaga	aagttctgtt	ccaaagtcag	ccagctgagg	atgggccggg	gagccccct	34560
ccactggcgt	gctgtgctca	tggtgactgc	tgggttgaaa	agtaggggac	caggtgagga	34620
gaaagaccag	agttgcccta	ggaaaagtgg	gcttttggag	acagagcagg	aagaggctgc	34680
tcatttgagt	tagcgttgct	ttaaccccag	aatccagcct	ggcccctctc	tgcttcacct	34740
gggtatgtgg	cctgcggagt	ggctgaggtt	accaggatca	ttggcctact	gtcaggtact	34800
gagaagtgtg	agatgtatta	tatatata	tatatatgtg	atatatatat	atgcacacac	34860
acacatgaaa	aacaagagtg	aggtagataa	atgtttgaaa	aacaagcccc	cccaaaaaaa	34920
cccccaaaa	ctgtcccatc	taatacacac	atacacagag	atacatgtac	cctttcctca	34980
gcatttaaat	ccataacagg	ggcttttcta	cagtgattaa	aacaggtatc	acaaaataaa	35040
ttaaaactcc	tacatgaaat	accttcttaa	taagcttccc	ccctcctttt	ccctttaagg	35100
gcagaggcta	ggaagagcca	caagcctgaa	cctacagaca	agccagacaa	ctccagcttt	35160
ccttcctgca	tctaatctcc	agtcacaact	gcaaccatca Page	tcatccaaca 31	gttttcctac	35220

PCT - Sequence listing for submission.txt.TXT tcctaattta aatatttcca cccagaagca tctctcgcgc tgtcactgct ctggtaagaa 35280 35340 gtgctaaatc gaaacaagac aggacccctc ccccaacccc actccagggg gaggggcctc caagcccaga gctccgggat tctggttaag gaggaacagc aaggggctct agggccactg 35400 tagggtcagc tctactccac tttgggattt ccggcccggg agtgggcttt atagcacacc 35460 35520 cactaaagtt gctgctcctg gccatgggga gttggtgtct tacatcttgc tcccagggag 35580 gccacccctt cagacaagct ggttctaaag acaggtgggc ctgcttgtga aggaggtggc agatgggcca ctggaccagc tctgctgcat cctgggggact cagcagctat tgtgtgtgtg 35640 35700 tgtgtgtgtg tgaaagatca aatattcatt taaataataa tccaatgact attgtctgca gttaaaactg ctattgtatt cccaaattgg ggtgtgtgtg tgtgtgtgt tgtgtgtgtg 35760 35820 tgtgtgtgtg tgtgaaccaa agcaaggaga gaaagcaaag tgtgactttc aacaacaggg 35880 actagaaaca ctaaaccagg atgtgtggga tttttaacct ttttgtttct gacctgagtt 35940 tgtggcatgc cttgccctgg agcagatgct gtgtgcgggg aagcaaggaa aggagagagt 36000 agggcccagg agtctgtggg ctctggactc ccaccctccc cactccctca cctgtgactg 36060 tgctcacaga gcctatgggt tagagggtaa tgaatggggc tgcagggagc aggggaaggg 36120 agatgtattt ataaaaaagg catcaaacag ttcacggcaa gttatgtcct agaagcatca 36180 gttgccggag aagaggaaga aaaaccacac tctagtgata agcagaggaa gtttcttgga 36240 gtgagcagaa aggaagaagg ggtagacctg aaagtttcat agattaaatc cacaaagata aagaacaaaa aaaaaatagc agcttttctt ttcctgtaca gatgtataga tgaatatctg 36300 36360 aactgtaaaa aagttataaa actgacatta aagacgatgt gtatgcaaat gtttcacggt 36420 ctaacataga actgagagac ccatgaagaa gtcctagtaa cagaccatgt gaaagctcac 36480 actgcttgga tccactgcct gggcgggcgg ctccaggctg ctgtggctct gaatcccttc 36540 ctcgaacatc cataaccaac agccaggccg agtccccgga accctttcga gtgtgtggcc 36600 ctcaggggag gggcaggagg gaggtcgggg agggggacga ggctggtgtg aggaccacct 36660 tgacccacaa cctgaccttc aagcttgccc atggccactt cctccagaat tcttggggtg 36720 ctgtgggtgg gggaggggtg gagaaccagt tctgctttcc ccttcttcaa ggagggcgag 36780 ttccatcttg tccagttctc ccaaacggta accatgcaac gagacccagg agatgtgggc 36840 tgggagagcc gggcacagtg gggggcctca gcacgtgtct ctcaaatgtt atcatcaacc 36900 agacaccatg gttcatccca cgcctctgga caaagggaaa tcagcgcagg gagtatatgc 36960 gtgtgagaaa aaccaaaccg aaaacaggat tttggcaaaa atggcagcgt gaaaaatgat 37020 agccacggat gaacaatggc ccttttaaat tttggggtga ccctaaaaaa ggttaaaaaa 37080

cctacggtgt	PC caggcaggtg	T - Sequenc tatgcggggt	e listing f gatgaggagc	or submissi cccaggggca	on.txt.TXT gccattaagt	37140
caatctgatt	tttttttt	ttttaaaaaa	gaaggcttcc	cagatgggcg	ttcacaaaca	37200
tttttccact	gtaaagcaga	aaagagagaa	aggagagcgt	ggaagtggaa	ggggagaggg	37260
cagagaggga	aggcagagga	gagaaaaagg	cagagaacga	agagactcaa	ttctcgagtg	37320
tcctgttgct	attaagtgtt	gtcattaagg	tttgcagagg	cccatgtcag	ttaagggttc	37380
gggtaaagga	aataaaaagc	tgcttgcata	ttgaaaaaag	gaaggtccca	aatgtgttta	37440
ctgcagagaa	gccgtctccc	gtgggcagca	atggcaggtc	tgaagatcca	ctgaggtaca	37500
ggaggcttgt	gaatagattg	ttacaacctg	ctctccctc	cccgcccccc	cgcccaccga	37560
gtgggcgcac	acacgttact	gttggcgcgt	gcttcggtgt	gtccgaggat	cagcaggtcg	37620
aggactgggg	cagaggcaag	gccctctcgt	tggcgcgtcc	cccgttcatg	tgagcgtaag	37680
gctgtctctc	atcaaaactg	gcgcggagaa	cgagcacgcc	agggcccggg	ccattctcag	37740
ccttgtgtcc	tgagtgtctt	tcaggcagag	gcagggaggc	tgaggaggcc	gaagggtcca	37800
gtgggacgct	ctccatgttc	tcaggctcca	tctccagctc	ctctggctcg	ggaggcttgt	37860
tctcctcgct	gtagtagaag	gagacctcct	ggaagctggg	ctccatctca	tccttgatgc	37920
tgccgatgat	ctccaggaag	gagggccgca	tcttggggtt	atactgccag	cacatgcgca	37980
taagttcaaa	cctaagggag	tgatggggaa	gaaaggaatg	agctgccaga	gagacccaga	38040
agaactgtac	cacctctgca	ctctctgctt	cccatctgga	tgcctctggc	atcctgccat	38100
gtatcttgcc	cagaacccag	gcccagccac	agtgccaagc	ccagactcac	ttcaagtctt	38160
ggttcaccga	ttccaccatg	gacggttgta	ttaatgatag	cactgctaag	agataaaacc	38220
cacttcctgt	ctaagcacct	cttctggcca	cacattaacc	agaagaggaa	acctctctct	38280
ctcactaatg	agaatcacag	ctttcctgac	aggcaccatt	ctctgtatct	cacaccaggg	38340
ctatttctaa	gtttcttcct	ggcaccaggg	cgcccctggc	agtgggcctg	agggaggagg	38400
cggcaggggt	gctagacaga	cggagcacat	atcccaagct	tgctatctca	cgccagcacc	38460
tgctcactga	ggatgtccca	tgaaggaaga	tccctgtctt	gaagatgtag	gatgcccagg	38520
agcagagttc	taatagaaac	ttcaagtcgg	atgccaacga	accaagggaa	gtcctaagca	38580
tcattttctt	ctacaaacaa	ggccaaggta	aaaacagtat	aaagcccatg	acgtacctcc	38640
atcactccca	caaggtcaca	aacctttgca	aagcttcctc	gtcctcgaga	gttacatggg	38700
ccagctggca	cacaggacag	aagagaaagg	ctgctcatgc	agccaccgtc	ctgaccagca	38760
aaggcctggg	agtagacagt	ggaggagacc	ctaagcaagt	gaaggtgtgt	attgctgaca	38820
cgtgcaaggc	catgtcaagg	accccaatgc	cccagtccca	tgggagtggc	aaagtctacc	38880
ccagtgatgc	ttgcttagag	agatggtaaa	gccttcccct	gaggtccgag	ttgcaagtgc	38940
tgacagtgtg	tgcagaatat	gtccactgtc	acgtccttcc Page	cctggaagtt 33	tacagcctca	39000

PCT - Sequence listing for submission.txt.TXT agacggcttc cctgcagaga tggctaaacc tgcctccatg ttcagctgta tataataatc 39060 ctgcttcctt gtttatctgc atgcagtaat ctgcctctct gttcaaatat atacgctaaa 39120 catactgagc ttccagagcc cagtccacgc agtccccgtt tctctatacc caagtgcaca 39180 39240 ctctttgttc attcccttga tgccctcgtc aagtcatagt tctgcaaccc aggccatgca 39300 gtgaaccaca cctgggctct gacggatgga cagacacaca ggcccgacag aaaacaagga 39360 cagggtggtc atgattctga gggaaagggg tacctagcag ctctcaatca caggcgtgtg 39420 agaccaaagc actctccacc tatgctcctc caggaaactg tgttttataa aaactcctgg ctcaacagac gctttacact aaaacccaca aatggaagtt cgaacatata ggaatctcaa 39480 agcaccctga acaggcttct aacattctac caggctgatc actgggccac caggacactt 39540 ctttacaaag caaataatcc cacaggggta aaggcgtgtg aaagcaacct attggtaggc 39600 atgaagttgc ctgtgcagag aaagccactc ttgcccatct ggccagcttc cttggactct 39660 gtaggatcaa gtcaggccag gtggaaggta gttatcttaa aactgaaaaa aggtgcattg 39720 39780 gagatccacc tccaagaatt aagcactctg gaggcccagg gtgaagccaa ccaattacag cggagccagg tgcagcttgg agcctgttgt tagcggaatt gtaccagagc agagctggtt 39840 39900 acacagcacc tgtggctgtt tctaagctcc tttgtaggct gagtagttga gacagcggct gtttagctag gaaccttaca atatttactg cctactcctc tggaggtaaa gaaaaatccc 39960 aattaagtgg ccaatgtctc gacggaggaa aacaaactgg accaaagacc aggctaacta 40020 40080 ggtattctca ctggctctaa gtgactggtc ctagtggcac atgacaggtt gcaggtaggt actaaaagct ctaggcccgg gagtcacgtc agtccccgag agccagagat gtctctttac 40140 40200 tccaatgatt acaacacatc ctcattgtat gcataaggga aaagcaccaa ccacagcatt tgatcatttg tctgaagtca cacagggagt gagctggaac ggcgtgaggc tgtcagacaa 40260 tgcagcttta ctgtaagtaa ccatggtctt gctagcagac ggcgctctcc cgactgtcta 40320 cagacagtca gatctcctga gccggcttgc tctggttagc tgctgcagaa gcttgttctc 40380 cccggtcccc atcatttccc gaaggattaa tcggaatggg aagcagacac aaggagctta 40440 40500 gctccgtggc caggctgcaa tttcctctct ggctgacagg cctagccctg aatagaaaag tgcaaccggg ggcaagaaca tgagatgtgt ctggccccaa gccccgtggc caggggtggg 40560 gggtggggct gaggaggtgc cacgggcagg gtagggatga ggtgacatca gtaaaaacaa 40620 40680 gccatgtgat gcctctttta aatcatccca gagtcagccc ttccagggct gcccataaaa 40740 ggaagtettt tttgetetgt gegatttaag acettgtttt ttttttgttt tgttttttt aaatactctt tccacaagaa aactctccag tagactctgg gattaataag ctgataaaat 40800 gctccctcta aaaagcacac tttaaaacca ctggacagct ctgatgagct ggagccgcga 40860

	DC	T - Sequenc	o listina f	or submissi	on tyt TYT	
tttacagaat	atgtccctct	gtgaaggtgc	acacctatcc	ctctagaagt	gagtgctatc	40920
ctggggtgta	cgcccaccgc	tatgcccatt	cctcacttgg	cttctgagcc	cccaagcaca	40980
ccccgtgtct	tcagctggac	aggctgccat	ctatgtgagg	cactggcaaa	ctgaaatatg	41040
cccaggacct	catgtataca	gtacccctgc	tgccgcctgt	tagtactgta	ccaggtagta	41100
gtgactctta	gcagggatca	gactttcaga	agggcctacg	ggactgagtg	ggtcctcctc	41160
tagcatctca	agcaactaag	gttgttttag	ggccaggacc	tagacgggga	tgctatatag	41220
cccagttgct	ggcacacagt	cgatgccagg	gaccgtccag	cagacactgt	cacctgcctg	41280
tgatgactct	attcaattta	tctcgacaaa	accagactgg	gattcccagc	ctcctggggg	41340
tggagaggaa	aagtacagaa	gtagtcagat	tggactgagt	atgtctcagc	tgcatctgag	41400
ctggtgacgc	tcggctagta	aaacgttcaa	gttccttcct	gaatcccgca	tcccgaagac	41460
ttggcatgtg	agctctggag	atgttaatgg	atcaaatgga	tcaattctgt	ggctgagctt	41520
acatcgtcgt	cccattctgc	agcacgaggg	ctggaacctg	tttcaggatc	tccaggttcc	41580
gtgaactctg	ggactggccc	ctgacctcag	cagggttcac	tgacaaatct	gtgtccaaag	41640
ccctgaaacc	caggggtaaa	gatgggaatg	ataggctccc	ctgacccagc	ctcacagaat	41700
ttgctagatc	aattcaaact	gagctattgc	actgacagtc	agacctggat	accctggtgt	41760
ttggtggcag	cctttcctct	aaagctagaa	cactttgtaa	tacacaaggc	tggatactta	41820
gctactcctg	aagcagactg	gttcatgtgt	agggacgacg	agaccaaagc	atggccagag	41880
aaagggctgt	tcctgcctca	gaaccacacc	atggaagtcc	ttcctctacg	tgtgagaccc	41940
aacaggcttc	agactactcc	caagagtgtt	tgcttactgt	gccaaaaaaa	aaaaaaaaaa	42000
atcctttcac	agaacacatc	ttcctctcat	cagcgtctca	gccaaatcag	ggcaccacac	42060
tccctactgg	agcagcccgg	ctcccttccc	ttcactctgt	tcttttctta	gaaaggagac	42120
cgatctgcca	agggggttct	gaatggcaaa	gcaaaaaggc	ctcctgaatc	aatcatttcg	42180
catccaagag	cggcctccgt	gtgtaagctt	cctcctctct	atgctgggaa	caggaagtcc	42240
actgcctttc	ccatagcagg	tggctccttc	ccaagcatat	taaattcata	ccaaaaaaaa	42300
aaaaaaaaat	ccaggcagct	ggggatggat	caacttcagg	agttccatga	gtttctcaga	42360
caaatgtttg	ctccagcata	aaagaaaaga	aaaaaaccaa	caatacctct	cctgtgacca	42420
ggcccaaacc	acaggaacaa	aactcacacc	tgctcttttg	aacggtttct	cagctcgtga	42480
gacagtgctg	atcctggtat	cctaaccaag	gctggtgggg	cacaccctta	cacagactca	42540
gaggcagcca	tgctcctact	ccatcctttc	acctttgccc	acatactgac	tattctcgca	42600
atggacgagt	aggactgccc	tgcaccactg	aggtcaaagt	aaagctataa	cagcactcag	42660
aacccagagc	ttctctaggc	aggccccctg	catcctgtac	gccttcggag	gtcagtttag	42720
aaaggccaca	gtggcagtgt	tctccgtgaa	gatgctgcag Page	ggcacagcag 35	gccacggacc	42780

PCT - Sequence listing for submission.txt.TXT agtcagtggc tcaatatggc ctgctgtcta ttcagttttg taaggccctc ccaagcaaga 42840 42900 gggtttttt tttttacact tgccaacagc tggggcaaaa acaaacaaat taacaagtcc 42960 cccacgcccc acccccaaat aggagtattt tataagaaga aaacgagagg aattcaaatt 43020 ccaatataaa gttttagttg ggcaccagca gtaacactgg ctgcaatcca agcactaggg 43080 gagtttgagg caggaagatt atcctaaata cctgggctac actgactcca tccttgttga 43140 ttcctgaatc atagtggcag agcagagggg ctggaaggaa gagtgagcgt gcggtcccca 43200 gcaccaccaa tcctctccag tgtattagag aaatcctctc agtctatgga gtggtccaca gagaagccac ggcctctccc actacacaga accatcactg ttcctaccgc cctgtagtaa 43260 43320 atccgatctc cttacaatca ccccacgtac cggagtatct tcatctgcgg gaagccctgc 43380 ctctgaccag cagctatctt ctggagaccc tgagctagct agtgtcacct catcgagctc ctcctaggtt tcattagaaa gcctgtgaga tgacattttc aactgttgga gcctcacggg 43440 43500 ggacgatgct agcccacacc ttgacatctc aagattcaga gtacagtcac tagcacctct 43560 ctgtgctctg cccaccacct gcactgcacg cccaacctct ccatctgtac attgcctcac 43620 catccaaggc gccacgagag tgagcgctgc gctggggaag agaaggccag gggtaggcag 43680 agtcttttgt gtagaagtga agaaatcttg acaacccccc tgggattctt tcactagtgg 43740 agctgaacct gttttgaagt gtttctggga aactgtatgg gtcctgacat atcagtggga 43800 acctgctttg atgcttaacc ccgagatgca gagcaacagc cgagccccac cttaacgtgt 43860 gcacatcaaa tgcaagtcca ctgctctcaa cctgtactcg atgagccaat cggaatacct 43920 tcatgtcttc cttgaaacct cactccaaga agtgccattc tcggggctgg agagatggct 43980 cagcgggtaa gagcactgac tgctcttctg aaggtcctga gttcaaatcc cggcaaccac 44040 atggtggctc acaaccatcc ttaatgagat ctgacgccct cttctggtgc tgtctgaaga 44100 cagctacagt gtacttagat ttaataatga ataaatcttt aggccagagt gagtggggcc 44160 gaccggagtg ggcaaccttt gttcccagca accacattaa ggctcacaac catcagtaca 44220 44280 tcattctcca gacccactga gccaccaaca tcagatgaca aagaaagacc tctactcaag 44340 agagtacaaa taaaaggccc acatgtggaa agattcttcc ccaattttgg caacaccagg taacttctga ggggtggagc ctaggaggct gccaggtcat tagaaagtta tcttcaagat 44400 44460 ttaggactac agcaggaaga ttgtgaaccc ctttaatgca ggggttctca accttcctaa 44520 tgctgtgtcc ccttgacaca gttcctcatg tcgttgtgac ccccaactat aacactactt tataattgta atctgctact gttatgaggc aaaatggaaa catctgtgct ttctaacggt 44580 ctcaggtaac tcctgtgaag gggcaagggg tcacgactca caggtagaga acggcttctc

taatggctcc ctttcacttt caagcccaa agtgagactg tgcgctctgc accacctttt 44700 ctaccgtaac agttactcg cacaaatcc agtgagactg tgcgctctgc accacctttt 44700 agccaatgtg aaatgcttct ccttgtaagc tgtttactc agggagttc tcgagtgac 44820 ctggctgagc acggaggtgg acgtgacacc acgtgtgtac tgccatcgag tgacaattct 44880 cacaaccaat cgatgcagga tgttatttt acaagaatg gacgaggca accatctcac 44940 cacacccccc tagggtgtgc ctacaagcat gtccaaagag ggatgagctc accactggc 45000 taggtccatg cagctcgaag ggattaagaa gacaagcagat ggtctgtgac cttgtgtgg 45000 taggtccttg acgcttgagtc acccggcag agaaggact cctgacaca gagctctgtg 45120 tgagcatgt gctttagtct acccgtgcaa gagaggagt tttcaaaat ggctcagga 45180 aggacatgt gtattcagcc tccagggggt tgggggagg tttcaaaat ggctcagga 45180 taggacatgt gtattcaga gatgggagat tggggggggg gggtaggtg ggctgagag 4520 gattggtcat gtattcaga gatgggagat tggggggggg gggtagggg ggctaggg 45300 cacgccatgg tgcaaagtg caatagcac tggggggggg gggtaggtg ggctgagag 45300 cacgccatgg tgcaaagtg caatagcac tggggggggg gggtaggtg ggctgagag 45300 cacgccatgg tgcaaagtg caatagcac tggggggggg caaggagac aggaggaga 45360 taaggagcag cacaaagtca cagatccaa agctcaga gagggggca aggagagac 45480 tcaggggagt tgccggctt gtccagaagg caccctcca tgacgaaacg agaacttgc 45480 tcagggcagt tgccggctt gtccagaagg acagcctgg gggtgggc ctggaaatc atacagcata 45480 tcggaggact tacaggtgg acgaaacagg acagctcag aaagaggaggac 45500 ccgaaggacc tacaggtgga acagaacagg acagctcag aaagaggaggac 45600 ccgaaggacc ttatgtggaca tcaaaccagc agcagtgga gaagaggacgac 45600 ccgaaggacc tttgtggaca tcaaaccagc agcttgcta cgtgtggag atcttcca gaggacgac 45720 acgactccctct tgccagcatt tcttagact tgggccatga cttgacagcggg gaaataatg 45840 ttaggggct tcaaccagcc tggccactga accatcagcg accattac 45900 tgtctggtcc cagccattac ttggacataa gccaacagc actacagcg accattac 45900 tgtctggtcc cagccattac ttggacataa gccaacagc actacagcg accattac 46020 ctgcaggaga ttcttcatg cagcctaga acaatagga tctgagaca accattac 46020 ctgcaggaga ttcttcatg ggaggagac tgggcctgga gtatgacc acacagca 46140 ttctgactg ctggttgag gaagagaac gggggggggagga tacaattca acagggga 46200 accttctcag ggaggag ttggaggag ctggaggag acagaagag gaagaaca a		PCT - Sequen	re listina f	or submissi	on tyt TXT	
agccaatgtg aaatgcttct cettgtaage tgtttatete agggagttte tegagteae 44820 ctggetgage acggaggtgg acgtgacace acgtgtgtae tgcateagg tgacaattet 44880 cacacaccaat cgatgcagga tgttatttt aacagaagtg gagcgaggea accateteae 44940 caacccccce tagggtgtge ctacaagcat gtccaaagag gagtgagcte aaccgtgctg 45000 taggtccatg cagctcgaag ggattaagaa gacagcagat ggtctgtgae cttgtgctgg 45000 ggctctctga getttagtet accegtgcaa gagagtgact cetgaccaca gagctctgtg 45120 tgagcatgct gtatagacct tecagggget tggggagage tttcaaatet ggctcagcag 45180 tagtaccata cttgcatttt tgtcttaaaa attaaatttt gcatgaaaaa gatgagccag 45240 gattgctcat gtatttcaga gatgggagat ggggggggg gggtagtggt ggctgagage 45300 cacgccatgg tgcaaagtge caattagcae tggggggggg gggtagtggt ggctgagage 45300 cacgccatgg tgcaaagtge caattagcae tgggggggge aaggcae aggatgagat 45360 taaggagcag cacaaagtca cagatccaae aagetcagaa gcagcaggat agagcettte 45420 taatcctete tgtacccae acacaacgga gtgggtgggt etggaaatae atacagcata 45480 tcagggcagt tgtccggctt gtccagaagg ccacceteca tgacgaaacag aagaacttge 45540 tcgttggaca agcctggaa gaggacag acagcaggg gacteteeca gaggaggace 45600 ccgaaaggace tacaggtgga acagaacag aacagctcag aaagggatgg gaggggcae 45600 ccgaaaggace ttgcagcat tcttagacte tgggtcgta aaaaaagtg cctcaatgt 45720 accactect tgccagcatt tcttagacte tgggtctga aaaaaagtg cctcaatgt 45720 ccttgtcact gctaagget cctacatgttt agggectgaa acagctcag aaagggatgg gagggccat 45780 ctttgtcact gctaagget cctacagttt aagagcccga tctcaagggg gaacattcag 45900 tgtctgtgtc cagccattac ttggacataa gccaaattag ctctagtgg gaacattac 45900 tgtctggggat ttctttcat gcagcttga atactgaac cagagctgg aacactact 46020 ctgcagagaa atctgatcag ggtagaaaa ccggtcaga atctgtcaa gtctgtaga 46200 atctgactg ctggttgtag ggtaggaac tcgggctgga atctcaaa ggccatgge 46200 atctgactg ctggttcag gaagggaac tgggcctga atctcaaa ggaggtggt 46200 atctgact tgggtcaaga agatgaaa ctcggcccga atgaccaa gggggtgtgt 46300 gcagagagg ttctactg tgggtcaga gaaggaca ctgggcagaga acacaggga aacaaagga 4640 gcaaaaaaa agagtccct tggctaaga gctggctga gtatgaacc atcagggaa aacaaagga 46440 gatccatga tgcagaacc tcagaagaa	taatggctcc cttt					44700
ctggctgagc acggaggtgg acgtgacacc acgtgtgtac tgccatcqag tgacaattct 44880 cacacaccat cgatgcagga tgttattttt acacagaagtg gagcgaggca accattctac 44940 caaccccccc tagggtgtgc ctacaagcat gtccaaagag gagtgagcc accattctac 44940 caaccccccc tagggtgtgc ctacaagcat gtccaaagag gagtgagcc accattctac 44940 caaccccccc tagggtgtgc ctacaagcat gtccaaagag gagtgagcc accattctac 45000 taggtccatg cagctcgaag ggattaagaa gacagcagat ggtctgtgac cttgtgctgg 45000 ggctctctga gctttagtct acccgtgcaa gagagtgact cctgaccaca gagctctgtg 45120 tgagcatgct gtatagacct tccaggggct tggggagagc tttcaaatct ggctcagcag 45180 tagtaactaa cttgcatttt tgtcttaaaa attaaatttt gcatgaaaaa gatgagccag 45240 gattgctcat grattcaga gatgggagat ggggggggg gggtagtgg ggctgagacg 45300 cacgccatgg tgcaaagtgc caattagcac tgggggggca aaggggaca aggatgagat 45360 taaggagcag cacaaagtca cagatccaac aagctcagca gcagcaggat agagcctttc 45420 taatcctctc ctgtacccac acacacagga gtgggtggct ctggaaatac atacagcata 45480 tcagggcagt tgtccggctt gtccagaagg ccaccctcca tgacgaaacag aagaacttgc 45540 tcgtggaca agccctggta gggctgctca gccagcgtgg cgatctccca gaggacgacc 45600 ccgaaggacc tacaggtgga acagaacagg acagctcag aaaagggatgg gaagggccat 45600 ccgaaggacc ttgcagcat tcttagact tgggtcctga aaaaagggt cctcaaatgtg 45720 acgactgcac tttgtggaca tcaaaccag cagcttgca cgggtgggg gtaattaatg 45840 ttaggggctt ctaacatct tctaagact tgggtcctga aaaaaagtgt cctcaatgtg 45720 acgactgcac tttgtggaca tcaaaccag cagcttgca cgggggggg gaattaatag 45840 ttaggggctt ctaacatct tcaagacta gccaaattag ctctagtgg gaacgacc 45900 tgtctggtcc cagccattac ttggacataa gccaaattag ctctagtca gcaagaaga 45960 cagagggaca ggcccagga atcttaaa acaatggga tctttgaggc t tccaagcac 46020 ctgcaagaaga atctgatcag ggtaggaaac ctgggccaga atcttcaaa gttctgaaga 46200 atctgactg ctggttgtag ggtaggaaac tcggcctgga atctcaaa gttctgaag 46200 atctgactg ctggttcag gaagggaac tgggcctgga gtattaaca gtccaagaa 46200 atctgactg gggtcaaga agatgaaaac tcggccctgga gtatgaccc acaaggaga 46380 gcagcagagg ttctactgc tgggtatgg cctgtcag ggatggaag aatgaaccc gaggggggaacc 46380 gcagcagaga ttctactgc tgggtagag cctgtcaga atggccca ggggggaacc	ctaccgtaac agtt	acctcg ccacaaatco	aatggacccc	actgccgctc	ccacactggg	44760
cacaaccaat cgatgcagga tgttatttt aacagaagtg gagcgaggca accatctcac 44940 caaacccact tagggtgtgc ctacaagcat gtccaaagag ggatgagctc aaccgtgctg 45000 taggtccatg cagctcgaag ggattaagaa gacagcagat ggtctgtgac cttgtgctgg 45060 ggctcttga gctttagtct acccgtgcaa gagagtgact cctgaccaca gagctctgtg 45120 tgagcatgct gtatagacct tccaggggct tgggggagag tttcaaatct ggctcagcag 45180 tagtaactaa cttgcatttt tgtcttaaaa attaaatttt gcatgaaaaa gatgagccag 45240 gattgctcat gtattcaga gatggggag gggggggggg	agccaatgtg aaat	gcttct ccttgtaagc	tgtttatctc	agggagtttc	tcgagtcaca	44820
caaccccccc tagggtgtgc ctacaagcat gtccaaagag ggatgagctc aaccgtgctg 45000 taggtccatg cagctcgaag ggattaagaa gacagagat ggtctgtgac cttgtgctgg 45060 ggctctctga gctttagtct acccgtgcaa gagagtgact cctgaccaca gagctctgtg 45120 tgagcatgct gtatagacct tccaggggct tggggagagc tttcaaatct ggctcagcag 45180 tagaactaac cttgcatttt tgtcttaaaa attaaatttt gcatgaaaaa gatgagccag 45240 gattgctcat gtattcaga gatgggagat gggggggggg	ctggctgagc acgg	aggtgg acgtgacacc	acgtgtgtac	tgccatcgag	tgacaattct	44880
taggtccatg cagctcqaag ggattaagaa gacagcagat ggtctgtgac cttgtgctgg 45120 ggctctctga gctttagtct acccgtgcaa gagatgact cctgaccaca gagctctgtg 45120 tgagcatgct gtatagacct tccaggggct tggggagagc ttcaaatct ggctcagcag 45180 tagtaactaa cttgcatttt tgtcttaaaa attaaatttt gcatgaaaaa gatgagccag 45240 gattgctcat gtattcaga gatgggagat gggggggggg	cacaaccaat cgat	gcagga tgttatttt	aacagaagtg	gagcgaggca	accatctcac	44940
ggctctctga gctttagtct acccgtgcaa gagagtgact cctgaccaca gagctctgtg 45120 tgagcatgct gtatagacct tccaggggct tggggagagc tttcaaatct ggctcagcag 45180 tagacataac cttgcatttt tgcttaaaa attaaatttt gcatgaaaaa gatgagccag 45240 gattgctcat gtattcaga gatgggagat ggggggggg gggtagtggt ggctgagaccg 45300 cacgccatgg tgcaaagtgc caattagcac tggggggggg gggtagtggt ggctgagaccg 45300 taaggagcag cacaaagtca cagatccaac aagctcagca gcagcaggat agagcctttc 45420 taatcctctc ctgtacccac acacaacgga gtgggtggct ctggaaatac atacagcata 45480 tcagggcagt tgtccggctt gtccagaagg ccaccctcca tgacgaaacg aagaacttgc 45540 tcgttggaca agccctggta gggctgctca gccagcgtgg cgatctccca gaggacgacc 45600 ccgaaggacc tacaggtgga acagaacagg aacagctcag aaaaggggtgg gaagggccat 45600 ccgaaggacc ttgccagcatt tcttagacct tgggtcctga aaaaaagtgt cctcaatgtg 45720 acgactgcac tttgtggaca tcaaaccagc cagcttgcta cgtgtgggga accttgtccc 45780 ctttgtcact gctaaggctt cctatagggc tactgcaacc cagggctgag gtaattaatg 45840 ttaggggctt ctaacatcc tcacagtttt aagagcccga tctacagcgg acacattcag 45900 tgtctggtcc cagccattac ttggacataa gccaaattag ctctagttca gcagggaatg 45960 cagaggaca ggtcccagcc tggccactga cctgagacag ctaagcatc caacattcc 46020 ctgcaggggat ttcttctatg ccagcttaga aatactgatg ctaatggtc tccaaacgaa 46140 ttctgacct gtggttgag ggagggaac tcgggcatga gtatctaaa gtcttgaagg gtagggggg ggtagggggggggg	caacccccc tagg	gtgtgc ctacaagcat	gtccaaagag	ggatgagctc	aaccgtgctg	45000
tagagcatgct gratagacct tccaggggct tggggagagc tttcaaatct ggctcagcag 45180 tagtaactaa cttgcatttt tgctttaaaa attaaatttt gcatgaaaaa gatgagccag 45240 gattgctcat gtattcaga gatgggagat gggggggggg	taggtccatg cagc	tcgaag ggattaagaa	gacagcagat	ggtctgtgac	cttgtgctgg	45060
tagtaactaa cttgcatttt tgtcttaaaa attaaatttt gcatgaaaaa gatgagccag 45240 gattgctcat gtattcaga gatgggagat gggggggggg	ggctctctga gctt	tagtct acccgtgcaa	gagagtgact	cctgaccaca	gagctctgtg	45120
gattgctcat gtattcaga gatgggagat gggggggggg	tgagcatgct gtat	agacct tccaggggct	tggggagagc	tttcaaatct	ggctcagcag	45180
cacgccatgg tgcaaagtgc caattagcac tggggggacc aaggaggaca aggatgagat 45360 taaggagcag cacaaagtca cagatccaac aagctcagca gcagcaggat agagcctttc 45420 taatcctctc ctgtacccac acacaacgga gtgggtggct ctggaaatac atacagcata 45480 tcagggcagt tgtccggctt gtccagaagg ccaccctcca tgacgaaacg aagaacttgc 45540 tcgttggaca agccctggta gggctgctca gccagcgtgg cgatctccca gaggacgacc 45600 ccgaaggacc tacaggtgga acagacagg aacagctcag aaagaggtgg gaagggccat 45660 gtccctcct tgccagcatt tcttagactc tgggtcctga aaaaagggtg gaagggccat 45720 acgactgcac tttgtggaca tcaaaccagc cagcttgcta cgtgtgggac atctgtccc 45780 ctttgtcact gctaaggctt cctatagggc tactgcaacc cagggctgag gtaattaatg 45840 ttaggggctt ctaacatctc tcacagtttt aagagcccga tctacagcgg acacattcag 45900 tgtctggtcc cagccattac ttggacataa gccaaattag ctctagtca ggagagacg 45960 cagaggacca ggtcccagcc tggccactga cctgagacag ctaagcatc caactatcc 46020 ctgcagggat ttcttcatg ccagcttaga aatactgatg ctaatggttc tccaacgcct 46080 cgcaagaaga atctgatcag ggttgtaa acactgggta atgtctcaaa gtcctaagaca 46140 ttctgacctg ctggttgtag ggtagggac tgggcctgga gtatgacct acactggca 46260 tgcagaggtg gctgtgtcag gaagggaact ggggctgga gtatgaactc acaggcgaa 46380 gcagcaggag ttctactgc tgggtctaga gctggctgag gtatgaactc acagggcaa 46380 gcagcgagga ttctactcg tgaggtatg cctgtcagcc cagaagatgg aacactagaga 46440 gatccatgca tgcagacact tcagacagac aatggtcac ctgtcgcca gtgtggaaca 46500	tagtaactaa cttg	catttt tgtcttaaaa	attaaatttt	gcatgaaaaa	gatgagccag	45240
taaggagcag cacaaagtca cagatccaac aagctcagca gcagcaggat agagccttc 45420 taatcctctc ctgtacccac acacaacgga gtgggtggct ctggaaatac atacagcata 45480 tcagggcagt tgtccggctt gtccagaagg ccaccctcca tgacgaaacg aagaacttgc 45540 tcgttggaca agccctggta gggctgctca gccagcgtgg cgatctccca gaggacgacc 45600 ccgaaggacc tacaggtgga acagacagg aacagctcag aaaggggtgg gaagggccat 45660 gtccctcct tgccagcatt tcttagactc tgggtcctga aaaaaagtgt cctcaatgtg 45720 acgactgcac tttgtggaca tcaaaccagc cagcttgcta cgtgtgggac atctgtccc 45780 ctttgtcact gctaaggctt cctatagggc tactgcaacc cagggctgag gtaattaatg 45840 ttaggggctt ctaacatctc tcacagtttt aagagcccga tctacagcgg acacattcag 45900 tgtctggtcc cagccattac ttggacataa gccaaattag ctctagttca gcaaggaatg 45960 cagaggacca ggtcccagcc tggccactga cctgagacag ctaatggttc tccaacgggat ttcttcatg ccagcttaga aatactgatg ctaatggttc tccaacgccc 46080 cgcaaggaga atctgatcag ggttcttaaa acaatgggta tcttgggctc tccaaagcaa 46140 ttctgacctg ctggttgtag ggtagggact ggggctgga gtatgaactc atcaggcga 46260 tgcagaggtg gctgtgtcag gaagggaact ggggtaggat acactggcca gggggtgtgt 46320 cgcaataaca aagagtccct tggtctagag gctggctgag gtatgaactc atcaggcga 46380 gcagcgagga ttctactgcg tgaggtatgg cctgtcagc cagaagtgg aactaaagga 46440 gatccatgca tgcagcacct tcagacaaa aatggtcaca ctgtcgccta gtgtgaacac 46500	gattgctcat gtat	ttcaga gatgggagat	9999999999	gggtagtggt	ggctgagacg	45300
taatcctctc ctgtacccac acacaacgga gtgggtggct ctggaaatac atacagcata 45480 tcagggcagt tgtccggctt gtccagaagg ccaccctca tgacgaaacg aagaacttgc 45540 tcgttggaca agccctggta gggctgctca gccagcgtgg cgatctcca gaggacgacc 45600 ccgaaggacc tacaggtgga acagaacagg aacagctcag aaagggatgg gaagggccat 45660 gtccctcct tgccagcatt tcttagactc tgggtcctga aaaaaagggt cctcaatgtg 45720 acgactgcac tttgtggaca tcaaaccagc cagcttgcta cggtgggac atctgtccc 45780 ctttgtcact gctaaggctt cctatagggc tactgcacc cagggctgag gtaattaatg 45840 ttaggggctt ctaacatctc tcacagttt aagagcccga tctacagcgg acacattcag 45900 tgtctggtcc cagccattac ttggacataa gccaaattag ctctagttca gcaaggaatg 45960 cagaggacca ggtcccagcc tggccactga cctgagacag ctaagcatc caactactc 46020 ctgcagggat ttcttcatg ccagcttaga aatactgatg ctaatggtt tccacgcctc 46080 cgcaagaaga atctgatcag ggtaggaagc tgggcctgga atgtctcaaa gttctgtagg 46200 atcttgactt gggtcaagga agatgaaaac tcgtccctg cagaactcag gaggccatggc 46320 cgcaataaca aagagtccct tggtctaga gctggctgag gtatgaactc atcaggcga 46380 gcagcgagga ttctactcgcg tgaggtatgg cctgtcagcc cagaagatgg aactaaagga 46440 gatccatgca tgcagacact tcagacagac aatggtcaca ctgtcgctca gtgtgaacac 46500	cacgccatgg tgca	aagtgc caattagcac	tggggggacc	aagggggcac	aggatgagat	45360
tcagggcagt tgtccggctt gtccagaagg ccacctcca tgacgaaacg aagaacttgc 45540 tcgttggaca agccctggta gggctgctca gccagcgtgg cgatctccca gaggacgacc 45600 ccgaaggacc tacaggtgga acagaacagg aacagctcag aaagggatgg gaagggccat 45660 gtccctcct tgccagcatt tcttagactc tgggtcctga aaaaaagggt cctcaatgtg 45720 acgactgcac tttgtggaca tcaaaccagc cagcttgcta cgtgtgggac atctgttcc 45780 ctttgtcact gctaaggctt cctatagggc tactgcaacc cagggctgag gtaattaatg 45840 ttaggggctt ctaacatct tcacagttt aagagcccga tctacagcgg acacattcag 45900 tgtctggtcc cagccattac ttggacataa gccaaattag ctctagttca gcaaggaatg 45960 cagaggacca ggtcccagcc tggccactga cctgagacag ctaagcatct caactatct 46020 ctgcagggat ttcttcatg ccagcttaga aatactgatg ctaatggtc tccacagccac 46080 cgcaagaaga atctgatcag ggtcttaaa acaatgggta tcttgggctc tccaaagcaa 46140 ttctgacctg ctggttgtag ggtaggagac tgggcctgga atgtctcaaa gttctgtagg 46200 atcttgactt gggtcaagga agatgaaaac tcgtccctg cagaactca ggaggatggt 46320 cgcaataaca aagagtccct tggtctaga gctggctgag gtatgaactc atcaggcga 46380 gcagcgagga ttctactgcg tgaggtatgg cctgtcagc cagaagatgg aactaaagga 46440 gatccatgca tgcagacact tcagacaga aatggtcaca ctgtcgctca gtgtgaacac 46500	taaggagcag caca	aagtca cagatccaac	aagctcagca	gcagcaggat	agagcctttc	45420
tcgttggaca agccctggta gggctgctca gccagcgtgg cgatctcca gaggacgacc 45600 ccgaaggacc tacaggtgga acagaacagg aacagctcag aaagggatgg gaagggccat 45660 gtccctcct tgccagcatt tcttagactc tgggtcctga aaaaaaggt cctcaatgtg 45720 acgactgcac tttgtggaca tcaaaccagc cagcttgcta cgtgtgggac atctgttccc 45780 ctttgtcact gctaaggctt cctatagggc tactgcaacc cagggctgag gtaattaatg 45840 ttaggggctt ctaacatctc tcacagtttt aagagcccga tctacagcgg acacattcag 45900 tgtctggtcc cagccattac ttggacataa gccaaattag ctctagttca gcaaggaatg 45960 cagaggacca ggtcccagcc tggccactga cctgagacag ctaagcatct caactatctc 46020 ctgcagggat ttcttcatg ccagcttaga aatactgatg ctaatggttc tccaacgcctc 46080 cgcaagaaga atctgatcag ggtagggagc tgggcctgga atgtctcaaa gttctgaag 46200 atcttgactt gggtcaagga agatgaaaac tcgtccctg cagaactcag gagccatggc 46260 tgcagaggtg gctgtgtag gaagggaact ggggtaggat acactggcca gggggtgtgt 46320 cgcaataaca aagagtccct tggtctagag gctggctgag gtatgaactc atcaggcgaa 46380 gcagcgagga ttctactgcg tgaggtatgg cctgtcagcc cagaagatgg aactaaagga 46440 gatccatgca tgcagacact tcagacaaga aatggtcaca ctgtcgctca gtgtgaacac 46500	taatcctctc ctgt	acccac acacaacgga	gtgggtggct	ctggaaatac	atacagcata	45480
ccgaaggacc tacaggtgga acagaacagg aacagctcag aaagggatgg gaagggccat 45660 gtccctcct tgccagcatt tcttagactc tgggtcctga aaaaaagtgt cctcaatgtg 45720 acgactgcac tttgtggaca tcaaaccagc cagcttgcta cgtgtgggac atctgttccc 45780 ctttgtcact gctaaggctt cctatagggc tactgcaacc cagggctgag gtaattaatg 45840 ttaggggctt ctaacatctc tcacagttt aagagcccga tctacagcgg acacattcag 45900 tgtctggtcc cagccattac ttggacataa gccaaattag ctctagttca gcaaggaatg 45960 cagaggacca ggtcccagcc tggccactga cctgagacag ctaatgcatc caactatct 46020 ctgcagggat ttcttcatg ccagcttaga aatactgatg ctaatggttc tccacagcct 46080 cgcaagaaga atctgatcag ggttcttaaa acaatgggta tcttgggctc tccaaagcaa 46140 ttctgacctg ctggttgtag ggtaggagac tgggcctgga atgtctcaaa gttctgtagg 46200 atcttgactt gggtcaagga agatgaaaac tcgtcccctg cagaactcag gagccatggc 46320 cgcaataaca aagagtccct tgggtctagg gctggctgag gtatgaactc atcaggcgaa 46380 gcagcgagga ttctactgcg tgaggtatgg cctgtcagcc cagaagatgg aactaaagga 46440 gatccatgca tgcagacact tcagacaga aatggtcaca ctgtcgctca gtgtgaacac 46500	tcagggcagt tgtc	cggctt gtccagaagg	ccaccctcca	tgacgaaacg	aagaacttgc	45540
gtccctcct tgccagcatt tcttagactc tgggtcctga aaaaaagtgt cctcaatgtg 45720 acgactgcac tttgtggaca tcaaaccagc cagcttgcta cgtgtgggac atctgttccc 45780 ctttgtcact gctaaggctt cctatagggc tactgcaacc cagggctgag gtaattaatg 45840 ttaggggctt ctaacatctc tcacagtttt aagagcccga tctacagcgg acacattcag 45900 tgtctggtcc cagccattac ttggacataa gccaaattag ctctagttca gcaaggaatg 45960 cagaggacca ggtcccagcc tggccactga cctgagacag ctaaggcatct caactatctc 46020 ctgcagggat ttcttcatg ccagcttaga aatactgatg ctaatggttc tccacagcctc 46080 cgcaagaaga atctgatcag ggttcttaaa acaatgggta tcttgggctc tccaaagcaa 46140 ttctgacctg ctggttgtag ggtaggagc tgggcctgga atgtctcaaa gttctgtagg 46200 atcttgactt gggtcaagga agatgaaaac tcgtccctg cagaactcag gagccatggc 46320 cgcaataaca aagagtccct tggtctagag gctggctgag gtatgaactc atcaggcgaa 46380 gcagcgagga ttctactgcg tgaggtatgg cctgtcagc cagaagatgg aactaaagga 46440 gatccatgca tgcagacact tcagacagac aatggtcaca ctgtcgctca gtgtgaacac 46500	tcgttggaca agcc	ctggta gggctgctca	gccagcgtgg	cgatctccca	gaggacgacc	45600
acgactgcac tttgtggaca tcaaaccagc cagcttgcta cgtgtgggac atctgttccc 45780 ctttgtcact gctaaggctt cctatagggc tactgcaacc cagggctgag gtaattaatg 45840 ttaggggctt ctaacatcc tcacagtttt aagagcccga tctacagcgg acacattcag 45900 tgtctggtcc cagccattac ttggacataa gccaaattag ctctagttca gcaaggaatg 45960 cagaggacca ggtcccagcc tggccactga cctgagacag ctaagcatct caactatctc 46020 ctgcagggat ttctttcatg ccagcttaga aatactgatg ctaatggttc tccacgcctc 46080 cgcaagaaga atctgatcag ggttcttaaa acaatgggta tcttgggctc tccaaagcaa 46140 ttctgacctg ctggttgtag ggtagggac tgggcctgga atgtctcaaa gttctgtagg 46200 atcttgactt gggtcaagga agatgaaaac tcgtcccctg cagaactcag gagccatggc 46260 tgcagaggtg gctgtgtcag gaagggaact ggggtaggat acactggcca gggggtgtgt 46320 cgcaataaca aagagtccct tggtctagag gctggctgag gtatgaactc atcaggcgaa 46440 gatccatgca tgcagacact tcagacagac aatggtcaca ctgtcgctca gtgtgaacac 46500	ccgaaggacc taca	ggtgga acagaacagg	aacagctcag	aaagggatgg	gaagggccat	45660
ctttgtcact gctaaggctt cctatagggc tactgcaacc cagggctgag gtaattaatg 45840 ttaggggctt ctaacatctc tcacagtttt aagagcccga tctacagcgg acacattcag 45900 tgtctggtcc cagccattac ttggacataa gccaaattag ctctagttca gcaaggaatg 45960 cagaggacca ggtcccagcc ttggccactga cctgagacag ctaagcatct caactatctc 46020 ctgcagggat ttcttcatg ccagcttaga aatactgatg ctaatggtc tccacgcctc 46080 cgcaagaaga atctgatcag ggttcttaaa acaatgggta tcttgggctc tccaaagcaa 46140 ttctgacctg ctggttgtag ggtagggagc tgggcctgga atgtctcaaa gttctgtagg 46200 atcttgactt gggtcaagga agatgaaaac tcgtcccctg cagaactcag gagccatggc 46260 tgcagaggtg gctgtgtcag gaagggaact ggggtaggat acactggcca gggggtgtgt 46320 cgcaataaca aagagtccct tggtctagag gctggctgag gtatgaactc atcaggcgaa 46440 gaccatgca tgcagacact tcagacagac aatggtcaca ctgtcgctca gtgtgaacac 46500	gtcccctcct tgcc	agcatt tcttagactc	tgggtcctga	aaaaagtgt	cctcaatgtg	45720
ttaggggctt ctaacatctc tcacagtttt aagagcccga tctacagcgg acacattcag 45900 tgtctggtcc cagccattac ttggacataa gccaaattag ctctagttca gcaaggaatg 45960 cagaggacca ggtcccagcc tggccactga cctgagacag ctaagcatct caactatctc 46020 ctgcagggat ttctttcatg ccagcttaga aatactgatg ctaatggttc tccacgcctc 46080 cgcaagaaga atctgatcag ggttcttaaa acaatgggta tcttgggctc tccaaagcaa 46140 ttctgacctg ctggttgtag ggtagggagc tgggcctgga atgtctcaaa gttctgtagg 46200 atcttgactt gggtcaagga agatgaaaac tcgtcccctg cagaactcag gagccatggc 46260 tgcagaggtg gctgtgtcag gaagggaact ggggtaggat acactggcca gggggtgtgt 46320 cgcaataaca aagagtccct tggtctagag gctggctgag gtatgaactc atcaggcgaa 46380 gcagcgagga ttctactgcg tgaggtatgg cctgtcagcc cagaagatgg aactaaagga 46440 gatccatgca tgcagacact tcagacagac aatggtcaca ctgtcgctca gtgtgaacac 46500	acgactgcac tttg	tggaca tcaaaccagc	cagcttgcta	cgtgtgggac	atctgttccc	45780
tgtctggtcc cagccattac ttggacataa gccaaattag ctctagttca gcaaggaatg 45960 cagaggacca ggtcccagcc tggccactga cctgagacag ctaagcatct caactatctc 46020 ctgcagggat ttctttcatg ccagcttaga aatactgatg ctaatggttc tccacgcctc 46080 cgcaagaaga atctgatcag ggttcttaaa acaatgggta tcttgggctc tccaaagcaa 46140 ttctgacctg ctggttgtag ggtagggagc tgggcctgga atgtctcaaa gttctgtagg 46200 atcttgactt gggtcaagga agatgaaaac tcgtcccctg cagaactcag gagccatggc 46260 tgcagaggtg gctgtgtcag gaagggaact ggggtaggat acactggcca gggggtgtgt 46320 cgcaataaca aagagtccct tggtctagag gctggctgag gtatgaactc atcaggcgaa 46380 gcagcgagga ttctactgcg tgaggtatgg cctgtcagcc cagaagatgg aactaaagga 46440 gatccatgca tgcagacact tcagacagac aatggtcaca ctgtcgctca gtgtgaacac 46500	ctttgtcact gcta	aggctt cctatagggc	tactgcaacc	cagggctgag	gtaattaatg	45840
cagaggacca ggtcccagcc tggccactga cctgagacag ctaagcatct caactatctc 46020 ctgcagggat ttctttcatg ccagcttaga aatactgatg ctaatggttc tccacgcctc 46080 cgcaagaaga atctgatcag ggttcttaaa acaatgggta tcttgggctc tccaaagcaa 46140 ttctgacctg ctggttgtag ggtagggagc tgggcctgga atgtctcaaa gttctgtagg 46200 atcttgactt gggtcaagga agatgaaaac tcgtcccctg cagaactcag gagccatggc 46260 tgcagaggtg gctgtgtcag gaagggaact ggggtaggat acactggcca gggggtgtgt 46320 cgcaataaca aagagtccct tggtctagag gctggctgag gtatgaactc atcaggcgaa 46380 gcagcgagga ttctactgcg tgaggtatgg cctgtcagcc cagaagatgg aactaaagga 46440 gatccatgca tgcagacact tcagacagac aatggtcaca ctgtcgctca gtgtgaacac 46500	ttaggggctt ctaa	catctc tcacagtttt	aagagcccga	tctacagcgg	acacattcag	45900
ctgcagggat ttcttcatg ccagcttaga aatactgatg ctaatggttc tccacgcctc 46080 cgcaagaaga atctgatcag ggttcttaaa acaatgggta tcttgggctc tccaaagcaa 46140 ttctgacctg ctggttgtag ggtagggagc tgggcctgga atgtctcaaa gttctgtagg 46200 atcttgactt gggtcaagga agatgaaaac tcgtcccctg cagaactcag gagccatggc 46260 tgcagaggtg gctgtgtcag gaagggaact ggggtaggat acactggcca gggggtgtgt 46320 cgcaataaca aagagtccct tggtctagag gctggctgag gtatgaactc atcaggcgaa 46380 gcagcgagga ttctactgcg tgaggtatgg cctgtcagcc cagaagatgg aactaaagga 46440 gatccatgca tgcagacact tcagacagac aatggtcaca ctgtcgctca gtgtgaacac 46500	tgtctggtcc cagc	cattac ttggacataa	gccaaattag	ctctagttca	gcaaggaatg	45960
cgcaagaaga atctgatcag ggttcttaaa acaatgggta tcttgggctc tccaaagcaa 46140 ttctgacctg ctggttgtag ggtagggagc tgggcctgga atgtctcaaa gttctgtagg 46200 atcttgactt gggtcaagga agatgaaaac tcgtcccctg cagaactcag gagccatggc 46260 tgcagaggtg gctgtgtcag gaagggaact ggggtaggat acactggcca gggggtgtgt 46320 cgcaataaca aagagtccct tggtctagag gctggctgag gtatgaactc atcaggcgaa 46380 gcagcgagga ttctactgcg tgaggtatgg cctgtcagcc cagaagatgg aactaaagga 46440 gatccatgca tgcagacact tcagacagac aatggtcaca ctgtcgctca gtgtgaacac 46500	cagaggacca ggtc	ccagcc tggccactga	cctgagacag	ctaagcatct	caactatctc	46020
ttctgacctg ctggttgtag ggtagggagc tgggcctgga atgtctcaaa gttctgtagg 46200 atcttgactt gggtcaagga agatgaaaac tcgtccctg cagaactcag gagccatggc 46260 tgcagaggtg gctgtgtcag gaagggaact ggggtaggat acactggcca gggggtgtgt 46320 cgcaataaca aagagtccct tggtctagag gctggctgag gtatgaactc atcaggcgaa 46380 gcagcgagga ttctactgcg tgaggtatgg cctgtcagcc cagaagatgg aactaaagga 46440 gatccatgca tgcagacact tcagacagac aatggtcaca ctgtcgctca gtgtgaacac 46500	ctgcagggat ttct	ttcatg ccagcttaga	aatactgatg	ctaatggttc	tccacgcctc	46080
atcttgactt gggtcaagga agatgaaaac tcgtccctg cagaactcag gagccatggc 46260 tgcagaggtg gctgtgtcag gaagggaact ggggtaggat acactggcca gggggtgtgt 46320 cgcaataaca aagagtccct tggtctagag gctggctgag gtatgaactc atcaggcgaa 46380 gcagcgagga ttctactgcg tgaggtatgg cctgtcagcc cagaagatgg aactaaagga 46440 gatccatgca tgcagacact tcagacagac aatggtcaca ctgtcgctca gtgtgaacac 46500	cgcaagaaga atct	gatcag ggttcttaaa	acaatgggta	tcttgggctc	tccaaagcaa	46140
tgcagaggtg gctgtgtcag gaagggaact ggggtaggat acactggcca gggggtgtgt 46320 cgcaataaca aagagtccct tggtctagag gctggctgag gtatgaactc atcaggcgaa 46380 gcagcgagga ttctactgcg tgaggtatgg cctgtcagcc cagaagatgg aactaaagga 46440 gatccatgca tgcagacact tcagacagac aatggtcaca ctgtcgctca gtgtgaacac 46500	ttctgacctg ctgg	ttgtag ggtagggagc	tgggcctgga	atgtctcaaa	gttctgtagg	46200
cgcaataaca aagagtccct tggtctagag gctggctgag gtatgaactc atcaggcgaa 46380 gcagcgagga ttctactgcg tgaggtatgg cctgtcagcc cagaagatgg aactaaagga 46440 gatccatgca tgcagacact tcagacagac aatggtcaca ctgtcgctca gtgtgaacac 46500	atcttgactt gggt	caagga agatgaaaac	tcgtcccctg	cagaactcag	gagccatggc	46260
gcagcgagga ttctactgcg tgaggtatgg cctgtcagcc cagaagatgg aactaaagga 46440 gatccatgca tgcagacact tcagacagac aatggtcaca ctgtcgctca gtgtgaacac 46500	tgcagaggtg gctg	tgtcag gaagggaact	ggggtaggat	acactggcca	gggggtgtgt	46320
gatccatgca tgcagacact tcagacagac aatggtcaca ctgtcgctca gtgtgaacac 46500	cgcaataaca aaga	gtccct tggtctagag	gctggctgag	gtatgaactc	atcaggcgaa	46380
	gcagcgagga ttct	actgcg tgaggtatgg	cctgtcagcc	cagaagatgg	aactaaagga	46440
accttctcag ggagaaccct tgctttcaca aaattcttcc tggcctgtct gctcttatgg 46560	gatccatgca tgca	gacact tcagacagac	aatggtcaca	ctgtcgctca	gtgtgaacac	46500
Page 37	accttctcag ggag	aaccct tgctttcaca			gctcttatgg	46560

PCT - Sequence listing for submission.txt.TXT tcaggctgta tggctagaat gaagaaggct gcccatggca agccaacaca aggcttcgga 46620 46680 tggaacccta gcagggctga gccccacaga agagcctgag gcggccattt tccacttagc 46740 actctgagga tcctggccta agctggagca acagcctctg actgcatctt aacttttggt 46800 tcgcagcttc agtttccttc taggaacaaa agggttttgt cccaactgat gctaagcaat gtcagacagg aacagaacct cagcaatcag acccaagttc cttgggaacc ggcagtcact 46860 46920 aagacagaca gtgcagttac ggttttcaaa gacctggccc tagagaagca ggtttcctgt 46980 gtgtttcagg cctgggttct gccttgcaga gcctttgtgg acactcggag gcattcttta 47040 gaggctgcag tgctcaccct catgtctgaa tccggcctga gacaagcagt gatgtatgtg 47100 gttttctctt tttatcaacc ggtcttgacc aggttccctt ccaagccgac tccccttgtc 47160 tttcatgctt tccctggtgc accacaggct ttcaggcatt cagtcacaat cctggccccc agctcttgac tgccatgtct agattgctgg ttacttgact ctacagactc agcatgtcag 47220 47280 ctccagtgta actcttgctg gcaccctgtt ctcctcctgg actccctgca ggccaacttc 47340 ccattccatc ccaccccatc tcagcagcca gtctgctcat aggacggaca ggaagataga gagtataaat cagaaagaac gaagacgtgt aagggctggc cttcctgccc ttgtgaggga 47400 47460 ggggacagtc cctgggacat ctccccagaa gctcaaataa cagctgtgat aaatgcagat 47520 ggtcagggtg tggcttgacc tgaggacacc tcccctcacc atgttcctaa ggtctcctac 47580 caagtcaaac aaaatccttc caacttttct ttggattttt acctacttct gactgtgaat 47640 tcattctaaa atgactgcaa ttcctctagc aagcagaggt tcaggcagag ctgagcatcc 47700 gtttatacgt tctagtgtcc ttgatgtccc cagctgtgtg ctcaaacacc ccagcacttg 47760 gccttttctc ttcacgcatt ttcttattgg tttgtaatgg ctacgtaatc caagtggagg 47820 aaacctgcag gaagcaccct gtgcgcctct ggctgtggca tgcagttgtt acccagagtc 47880 gggggagaat gagtctgtgc tcactctttc cctatcctgt aaggtgatct ccaagcttcc 47940 agaaaaatga agcttagaac aaacagatgg aagtgtggcc ctaggtgtgc cctctcctgc 48000 gacctcatct acacatggaa cagagttctt tgattcgaca gagaagatgt aacctcggag 48060 aggctaattg cagagcagac ctcatcctag agtcgggaaa caaccaggcc gcgctgggtc 48120 atattcaaag gctatttcca atttgcacct gtcttccaaa caagatccaa ggctcttgac 48180 cgggaaaggt tcacgaggct aaagaactga tgtcagtcac tactgagata gtttctctgt 48240 gtggtcatcc gccctttgaa taaaccaacc accgcttctt ctgtgacaca acagcaacgg 48300 gatctcccga ggagacagcc aagacacttg ctgacattcg aggaggggga cgacgtgcca 48360 gggctcctgc ctgccaagaa ctccagttgt attttggaac ccgatgacct ccacacggtg 48420 tttccaagga actgcagtaa acattactac agagaagtct ttgcaccctc tggtcagtgt

gctactaccg	PC caagacactt	T - Sequenc attattaagg	e listing f aagatgcttt	or submissi gggtcaggaa	on.txt.TXT taatggacat	48480
cgtgtgtgtg	tgtgtgtgtg	tgtgtgtgtg	tgtgtgtgtg	tgtgtgtgtg	tgtgaacaga	48540
tgagaccaac	agaaaaccac	aaccaccaag	actcaagttt	tgggtttaaa	taaagcactg	48600
ccttcaatct	gaaggtttcg	tgagctgcgg	caggagcaca	tacataccca	gtaccaactc	48660
actgagagtg	gggaagagag	acgggggaac	aggcagaggc	gaaggcattt	ccccagtctt	48720
tggaaatata	atcaatattt	gctaaaaatg	gaaggaaatg	ttggttctac	ctactccttg	48780
gcttcccaca	gatacctttt	ttgctttaat	ggactccaca	caggaatatc	taaaagacaa	48840
agggctaaac	ggcactgaga	gctgaactca	aggctggcag	ttggtcacag	tgaacaaaac	48900
aaggaggaga	atgagccacg	agtgagaagg	tccaagctgg	ccatggaggg	aaactctcat	48960
accagacatc	agaatgagta	gtgaagacac	catccttgag	ggactcggga	gacatccagc	49020
gcacaggcag	caaccccttc	ccgcctttcc	ggtagtagtc	cgtctcgtag	atgtctcgtg	49080
tcataccgaa	atctggaggg	aagatgcaca	gttactcggc	tggaccaggt	cttggggcag	49140
agccctgtcc	ttcccccat	attcaaggtg	agacatgttc	ttgctccact	ctgagagggc	49200
tctagcatca	cagccacttc	acaggagaat	acaagacatc	tctggtcttc	atcaggctcc	49260
tttaagaaat	taactccctt	ataacattta	aagcgagagg	cagtttgcaa	aatcattgag	49320
taccatgatt	tttcaagaaa	atatacgccg	cacagggtga	ggatatagtt	ttaaagtttg	49380
gtccaataca	cgggaggatg	aagaccccat	ttacttggta	gtgtgtctct	actgctgagg	49440
aaaaggcctt	ttgccactcc	acagaggaca	atgtacgaag	taagaactca	ggaagataaa	49500
aggacagcaa	acagctgaga	tgttcttcac	caggctcctg	gagctactac	ccaacaccct	49560
ttcccaacac	aatactctca	ctcagttttg	aaaatgtttt	ccattttctg	agtttcatca	49620
tggtgaatgg	caggcttgct	tttttataat	ctcacattac	tgtgtcttta	tccatttttg	49680
attttccact	caaccgcacc	acctttccct	cacataaact	cttgcattct	ccttccctgg	49740
agggaagagc	tgctcaacct	ttaaaatgtc	ccctcgcacc	tctaagtggt	gccacaaaga	49800
ggtgaggtac	aaaaaaggca	gagcaaaccc	atgtagggtt	tgctctgcat	ggatgttaac	49860
ccaacacaat	tgacttgcac	cgctgtctga	gctactggct	gcctctcttg	aactgattta	49920
gggtgtgtaa	tccctgagat	gggggcactg	ggggacactg	aggaatgcag	aactcgcccg	49980
aggaggaaaa	aggaagtgct	taaatctcat	ctctgaatta	atccagagac	atgcaaatga	50040
gaggatctgc	tttgacttgc	ataaaagggg	aattctagaa	aacaatctct	ctccctaaat	50100
gcaaaagaaa	aatagaacaa	cccctcttc	ccaaacgggc	acacacaatt	taattctaaa	50160
aagaaaaatc	ataattataa	tagaaaatat	cctcataaat	gcgccacatg	gttaagcaga	50220
aaatataatc	cttactgatt	tggatttaaa	atggcaaaaa	gcacacgcac	acacaaaagc	50280
atttttccaa	ctgtaatgca	aaatgggacc	aaagcagcct Page	ctcggagttc 39	ctggctgtgc	50340

PCT - Sequence listing for submission.txt.TXT 50400 tgagaagggt gcacagcagg gtaagatgag gacaggggca caggcttgct gtcccagccc 50460 qcctcctct ccagctctgt cccaatccac tctcactcca caggtgggga aagatggcac 50520 agggagggaa ggcacctgcc tcaggccact caggagcaca gtttcctctg aggactaaaa 50580 tctagatccc cacacataag ggagggatgg gaggcaggaa ggaccacaaa ggctggttaa 50640 gaggatgcgc ctcttatcta gaaactctgg ggcggggtat cctcttaagg gctgcccacc 50700 aagctaggct cccagggctc caaatatgag tgtacaaacc cagagacagg ctgggggtat 50760 cttcagtaac tccaatgact gacatctgtt ctgtaacaca gctgcatgcc aacaccccta actcctgcaa tcagcaaaga agagagcccg actttggata cctctctaga gatgacaccc 50820 50880 atcgcttact aagaggccgg aatggctcat gcaaaaacca cttctagggt tgaggcaagc 50940 agaacatctc caggacacaa gctcaagagg cggccaaagg ttagtggctg atcgcttctg ctacatcgtc tgtccctctg cttgttctca ggatggacac ttgttatgtt tctgacctgc 51000 51060 tggcctatcg cagtaggaag gtaaagtata tgcaggatgg ttttctgagc aaccttgtta 51120 ctactttttt tttttttt ttttgaagta aaagacaaaa aaacaaagcc aatatacaag 51180 ctgtaaggct ggggagaatt tctagccaat gaccagagat gtaatgcaat cagtgtttta 51240 ggatcacaat gtgttggcag caacaaggta ggctgagcag ctaaggtcat ggcaggaagc 51300 tatgcacgac agaacggcca agtgcttgga gctaccactg aaggatgcac ctcagtggct 51360 taaccagcag catacatcag gccctcggtt caattcctgg cagcaggaga ggaggagaga 51420 acttagagcc gaccagtcct atgagtgaaa agcagtcagc agtgatctcc cgcggactga 51480 catgaccacc atataccctt cctgttacac tatgcagggt ttcaccatag gggcacctgg 51540 cctcttagga accccatggg cctattcagg gacaatgctc tttgtaagct gagaaacttg 51600 aggggtggac tggatggtga cattctcctc aagccaaaac cacttcagga agcaagctgc 51660 cccgattatt tctgtaacgt ttgacctggg gagcagggcg ccaatctgga ctaccatgtt 51720 aaggtgctct ccgggttaca gccaggaata gacagtcaca ccgactacat acatctttgc actcaagggc gaggcactgc tcctctcgga cataatgaaa atctctccag tggcagacta 51780 51840 atgactgcaa agtcccctca gcacctgtga gttcagttta gcctgtgctc caatctggaa 51900 agcaaaggac acacctccaa ttttgactgt gaaatcttcg gctaccatgc agttcctagc 51960 52020 tccagccatc tggatcatct tgcttaagct cggaggaatg aggactagat tattctgctg 52080 cagattcaaa acaagacaaa gccatgagca acggagacct ttcccccta acctcctgta ggtctacact aggagtcgta aatgcatatt tacttagtct gagtaccaca ggtcacctgc 52140 52200

agggagtcag gacttgctaa gaaggactag cacttctagg gaccagcaat ctcttttccc

accccctccc atgcat	PCT - Sequence list gcat gtgcatggat gtgggg	ing for submission.txt.T gcct gaagcttatg ttgggago	XT ta 52260
ccttctaccc actggt	tgag gcagggtgtc cctatc	caaac ccaacctggt caacatag	at 52320
tgctctgggg atccca	actc atccttccaa ggctgg	gaatc acaggtgtgc tgccacac	ca 52380
gcccagcctt tacctg	gctt ctgacgacct gaacto	tggt ccttatgcct gtgaccac	cc 52440
cctccccct agtctt	ttct atttggagca ggacaa	aaaat gatttgaagt gaatcago	aa 52500
gtttaggcat taagca	ttct cagctccagc tagttt	ccat gttcctttgg cttccgcc	at 52560
caccaagtgt gagtaa	gagg aaggacagag aacccg	taca aaggccacgt gaaacaga	ca 52620
cacttcctaa gtggat	tacc acgagetttg ettece	gtgc aagctgccag gacttatt	cg 52680
tcttcattcc cttctt	ctaa ggtacaaaga taggaa	gact aatgctttcc tcttggat	ta 52740
ctgttttcta cgggca	ctga ggataaccac agttca	nggtg gagttcacct tggagggg	ac 52800
caaggacact gagcag	caat gaggaccaat atcatg	tctg aagaggaggg caagatgo	tg 52860
ccttaggaac tgaaaa	gaat taacctaaga agtggt	aaaa tcataaacaa acaaacaa	ac 52920
aaacaaaata agataa	gatt tatgtctaag aggctg	atga gaatggctta gtgggaaa	.gg 52980
tacctgctgt caagac	aggg ggcctatgtt catgto	ccaa gacaggtatg gtaaaaga	tg 53040
aaaaccaact ccctca	aggt ctaagtaggt atgcac	atgc atatgcatga acacacac	ac 53100
acacacacac acacac	acac actacacaca tacaaa	cata aaaaattccc aaagctcc	gt 53160
caccccactc ccatgt	gcaa aaccaaccat gaccct	tatg cctcagtttc cctaactg	aa 53220
aaccttctca tacaac	acta tgaagccatc tcattt	ccta atgtatctca agtcacag	ga 53280
gagcatgacc aggctt	ggag atcacactat ttgggc	tagt atataggccc tttgtgct	ct 53340
gaccacgatg aacact	caag agcattctgg ctcttg	gcca gggttgctaa gttctcag	ca 53400
gatgccagac tctagga	aggc cagcaacagc cctcta	gcac gtccaggagt actctcca	ga 53460
cgacatggca tgtgag	gacc aagttgagct cattta	tcta tttaaccatt ttcactct	ga 53520
tccagggtct cttcct	ataa tctaggggat gtcctc	agag gatgtgccat cacaggtg	ct 53580
tccttgtcac gctgac	cttt agcaccgtta gggtct	taca tacacatggc aaagcagg	ac 53640
ctctgcagtt ccgtga	catg tacttatagg ctcatg	acac atactgcagt gtatgtgt	gt 53700
aatgttgtgt aactgt	tcaa caaagagctg tcactt	aaca tgtgaaaaac aaccaaca	at 53760
ggggacttaa ttatgt	gcag gaaagggctg ggctga	catt ttgtcagttc atggtaat	at 53820
gttgtcattc ttttct	tcat ctcgagaaag aagaaa	tctt tagttttgtt agagccto	tt 53880
aaggtgagca cacatc	cata cacttatcta agtaaa	taag caaacagcaa tgggggga	gg 53940
tagaatacgc tgaagc	cggg gtgtatacac tgaago	tggg tatatatact ggagctag	gg 54000
tatatacact gaactg	tgga gtatacattg atgcta	agat atatgtaagt tattttt	aa 54060
aaaattctga catgag		atga atttaaagat taagtttt Page 41	ac 54120

PCT - Sequence listing for submission.txt.TXT 54180 ttccgaaaga gactttcgta atccaacctg tctctttaca ttgaattaaa attttgtttt 54240 atgtttgtgg gtgttttgcc tgcatgtgtg tttgtgcact acctgcccac ggaggcccat 54300 ggaggccagc agaacagtga ataccgacag ttatgagccg ccacgtgggt gctgggaatc 54360 cacccagggt tctttggaag agcagccagt gctcttaact gctgagccat ctctatagcc 54420 ctttctctct ctacatgagg aagcggaggc ccagaggcat ctgttaactg aggactggag 54480 gtaaccaatg gcaaaaacag ccccgagagc acaagttacg ggtttactct gggcatgtgt 54540 caaaggcatt aagcacattc tgatgttagg aggtgcctta aaggaccact ctccagtctc 54600 cttctgtaga ctgggtatta ctggggtagg atgctgctgc tgggagaaac aggcatagct 54660 ttgtggctct gctatcaatg catacaccgc cttgtggctc tctcctgaaa cttcagaaac 54720 acacatgagg acatttgtga acaggtactc agaactaaaa tgaaggaacc atccatcact tggtagatga ttacgttgtg gaggaaaaga aaacgaaagc ttctacagag aaggggagca 54780 54840 aacccagaaa gggcccgaga agaggaagtt ccccttacag cgaatgcaga gacaagctgc 54900 ttagttagcc acaggtatca aagccagggc cgaagtgaga gcctcagagc ctgaggcagc cccatgaaag gcatttggtc cagcaatatt tctcaacacc cccatcagtt aactcttagt 54960 gaggacttag aagccaaact taagccaggt gcttgtggtg cataccttta atgccagcac 55020 55080 ttgggagaca gaggcaagcg aatctctgag agttcgaggc cagcctggtc tacgaagcga gttccaggac agccggggct gcacagaaaa aaaaacaaaa caaaatgctg tctcaaaaaa 55140 55200 caacaaacaa acaaacacaa aaataacaac aacaaaaaag aagtcagact cacatatgct 55260 aaaaagctgg ctgtgggcta acacaacaga aggggacact ccacagtgac taatcaaaaa attacacagg acctactcag gttcacagtt tgaaaatctc actagcctta agcagaatca 55320 55380 tgcagctgga atggttatca tttaaaagcg caggcacaat actggcttat tgcctagcct 55440 ggggagtagg ttcagggttt gagaagtgtc tgaagcagtg tcggggcaag gggagagcag 55500 tgtgtgccat caaggtaagg atagcatgct cacatgtaca cgtgtgtgtg tgtgtgtgt 55560 tgtgtgtgt tgtgtgagtg tgtttgtgag tgtgtatgcg agtgtgagag tgtgtgtgag 55620 tgtgtgtgtg tgtgtgtgt tgtaatgggc tcctgaggaa acagtggtct cgtgcacaga 55680 ccgggctgcg agtcactctg gccaaaacct ctgacaacct gaagagtgac ctttattgag 55740 tacttactga aaaggttacc agccacggtc atgaccctga ggtaaagaag aggctcaccc 55800 cgaggacctc gagagtaaac gtatgctagg cagtcaagtg tactggaaag tcagtggggg 55860 aggccagccc ggcctgagtg ggaagctgtg ggaagggttg gccatgacac gtggtagagc 55920 agctggggtt ggtgtaagat gtaggcaggg gtagcgggga tgcagaaaca agagcacaga gatgctggag gttgaatggg tgggatgcag agacagacct tccaaagatc ccagtctgcc 55980

	D.C.	T Coguene	a listina f	ion cubmicci	on tyt TVT	
tacacttgga	caatcctata	tagagggaac	tgacaagaaa	or submissi gcatatctca	aggcactcaa	56040
ggctgagaag	caaatggact	taaagacacg	tttcctacaa	gccagctcct	gaaaaaagtg	56100
gaccaagcaa	gataacacag	cgaggaacaa	aactgacctc	cacttctggc	ctcagagacc	56160
ggagataact	tttgagatca	ccgcgtgtca	ttagttccat	gatgaccagg	gtgggctggc	56220
cttgggatac	cacacccagc	aaccggacct	ggaggaatca	agaaaaggac	tcagaggggg	56280
aggggggcat	cccacatgat	gacctacgcc	tctcggaact	gggtggtgct	ggggcctgta	56340
gccaggagca	gagttctggt	gggagggcga	gggcgaggct	cccacctcaa	gggtctgtgg	56400
gtggcaagaa	tgcaacgggg	aaactaccca	ctgggaagag	ggcaaggcaa	caattcgtag	56460
ctggccaagg	acatacaggg	tggtcctttc	tgtccatact	ttctgtccat	gtctcatctt	56520
ggcttcttac	cacatggtga	caattgaact	ccttcatcac	cgaggcctcg	ttgagaaact	56580
cgattctttc	acgcatactt	gcagcctcgt	ttaccgtctt	gatggccact	ctggtttcgg	56640
gttcatcctt	gaccacaccc	ttggccactc	cttcatagac	catcccaaag	gacccttgtc	56700
cgagctcccg	gttcatggtg	atcttctctc	gagctacctc	ccattcatca	ggcacgtaca	56760
ctagtaacag	acaggatgga	aacggccctt	agacagagat	tacaagatgc	tgttccctaa	56820
gacccaccaa	ggagaacatc	aaggtacaaa	cagtccagca	cgggtactca	atctctgagg	56880
actccatgac	actttgaggg	tggtactcgt	agctaagaac	cagaaggaaa	ccaagaaacc	56940
taagatagga	aaaccaaatc	aaaccaaaca	acagtggttc	ctttttcata	tccttggcaa	57000
aaccccaacc	caacaaaata	aaaaaagcaa	attagcccta	agagacaaag	aaagtgggac	57060
ttctgttttg	cctgtcttca	tcaagggatg	gaaatgtagg	tcagaagggg	agaacagtgg	57120
gaggggaaag	gaccaaaggg	ggtcaaatct	cctcctccct	ggatgaagcc	agaggtgaga	57180
aacatcctct	gcatggcctg	ggtgccagtt	tacaggccac	ccagccccac	tgtaggcctt	57240
cagcgcttga	agtcgtgctg	gaagtaagac	atatactgca	ttttaaagac	ttgcttaaaa	57300
caagtaaaaa	aagataactt	ttaaaagatt	ttaaaattta	cgtatacatg	tgaaaatctc	57360
tctctctc	tctctctc	tctctctc	tctctctgtg	tgtgtgtgtg	tgtgtgtgta	57420
tgagcacaca	cacatgcaca	gatgtgaggc	accacccgtg	tttgggtgcc	tgggaaaccc	57480
agaagacagt	gttggcttct	cggacctata	gttacagatg	gcgggaggtc	tcttcacaga	57540
ggtgctggga	actgaattag	agttctccag	aaggtcagca	aggctctcaa	ctgctgggcc	57600
cattttttt	tccagctttg	tattccaaag	acttggttaa	agcaagttta	aaaagatagc	57660
ttttatatta	actgttggat	gttgtgggct	aaatgaaaat	tctaacagat	ttatctcatc	57720
agcttttaca	cttaaaaaaa	catggctact	agctgggtgt	ggcaacagga	aactgcagtc	57780
ccaccccagc	ccactgggca	tggaggttgg	agatggggtc	tgctgaacta	aaggcatctt	57840
cagattgtgt	ttcaaaacac	caagacaatg	tgtcagccgc Page		tatcagttca	57900

PCT - Sequence listing for submission.txt.TXT 57960 cgcacttcat tccacttctt ccatagccat gtccgacaac aagctcaagg tggctgagag ggagaaactc agtcaacact aaaggcagag actcaagaga agagtcctca gccatcaaaa 58020 58080 gaaaccgcag aaaaggagat gagaggccag ccccacccc caccccgca gagcgctgag 58140 gtaggtcttg tgcactacaa gcactgtctc cctatattcc tccatacagc tgtttaactc 58200 tggaagctgc agaggttgga tccagtttaa cacaccctgc tgcccctttc accgagatct 58260 agtgacgata cagactgcct gccttttcca cctgagagga aggagaactc acacgttgat 58320 gaagaaaaaa gcagggttgg gagatgaaac ccagggttca aatcccagat gattcaaggt gctctacagg ctgtaaaatg cagtttaatc ccagggctgt gctgtgttgt ttttcaagtg 58380 58440 atttgactta gtggaatgca tactgtttta aaaccatcaa ttttgtgaat ggctgttttc 58500 cctgcatgca tctgcactgt acgcacatag cacctgggtg ccactggcac gtgggttctg 58560 ggaatcaaat cagggtcctt ctagaaaagc agccagtgtg tttaactgct gagccatctc 58620 tctagccccg gaatgcatga aagtattaaa acttaacaca agaagccaaa ctcttgccta 58680 acacaqqtqa aqcctaggag cccccttcca ggggatctct agtgagggaa gtgagcgctg 58740 ggatggaggg ggactcagta gtgaccccac ggctttggcc tgcactctgc aatgccagga 58800 acctccctga cacggacctg aacagaattc cttctccagc ttccattttt ggttatgctt 58860 gatctggttt gagaaaaata aataaacgaa tagttctcag aaggaagggg gaagagaagg 58920 aaagaaaata agagaggcaa gtaagaaaga ccaaacacag gctccatccc ataacgccag 58980 tgggtacagc gagaactgaa atcatatcaa attaatacgt aagatctgga aagagaatac 59040 ctgctccatg agaaccataa cctaacagag ttactgacag ccctgtctaa cagaggatgg 59100 ccagcaggca tggcaagaag gaagccctag cttagagaca ggcctgggag gggaatcacg 59160 gctgtgtttg tttttatgct tttagatgcc gagctgcagt tggaggtggg agaccccacc 59220 agcaggtcat cacggttatc agtcaccctc agagcacaag cccttacttc taagtgatgt 59280 cttaagggaa gggtgtttat tataaattcg gggctgggga ccccattgac ttgtattttg 59340 aagaatggaa catacatctt gtggtggttt gaataggagt ggcccccaca gactcacaca 59400 tttgaatgct tggtcattag ggagcagtga tacctgacag agattaggag gtgtggcctt 59460 gttggaggaa gtgtggcacc gagggtgggc tttgaggttt caaataccag gcctatgtct tgctctattt ttgctgcctg atccagatgt agaactctta acccctctcc agcaccatag 59520 59580 caccatgtct gcctacatac catcatgttt gctaccatta caacatgggc ctaaacccct gaacctgtaa gctcctttaa gccagccact ttccatgaga agagctgctg tggtcaacgg 59640 tgtctcttca cagcagcaga acactaagac acatacttat ctgtctactc acttactctt 59700 59760 acttactggc tgatttgggg acaggactgc tctatcttgt tcatacttgc cttgaacttg

	PC	T - Sequenc	e listing f	or submissi	on.txt.TXT	
				cctcagtgtc		59820
ggattccagg	tttgtgtggc	cacatttggc	tcctgtgcat	gtttttgtat	ttcatggaat	59880
atgtatgtct	ggtaatttct	caactagaat	tctgtcttcc	atgggcctca	gacaacttgt	59940
gaccctgcag	aggctgagct	tgctgaggag	agcagagggg	gaaaggtctt	tataacacct	60000
ctctgtaagg	atggggacca	ctgtctccat	ttattacctc	taaggatcca	ggctggcttt	60060
taatgagaat	caactacacg	gcttgcttgc	tgcagagcat	ggagttaaaa	gcccatcaca	60120
tccattccct	gggaggtccc	tgaagttagt	ggtctcaacc	ctttttctaa	actcaatcca	60180
gctgccgact	ttagccagag	tacctcagct	ttgccagcca	gagctgttca	taaacttcgt	60240
acaatgttat	cagcactttc	ctgtagggca	ttctcagtgc	actcttgaca	acagcaacat	60300
gcagattaac	tctgggagaa	agacgtttt	aaagcacctt	tcagatgcaa	tgtcactttg	60360
tagctctttg	aggcaaaagg	cttgtgctgc	tgctgtgctt	gtcaaaaggc	caaacaaacc	60420
aagtgcagat	gaggtgacag	tgttctcacc	tgttgacctg	ggtagtgaca	agtttgttct	60480
tgctttgttt	tgaagggggg	agggagacta	tttctctggc	acctcttttc	tcttttataa	60540
ttattgacct	agacacaatg	gctgcacggt	tctggctagt	taggggacgg	aggcaaggtg	60600
ttcagatcat	ctgaggccag	gagtttgagg	ctggcctgta	taaacaatgc	atatttagtt	60660
tcttgatttt	tgcccgtttg	ctttcttgtt	tgttttggtg	gtgtgaggac	agaacccgtt	60720
ctggaacacc	gtaggcaaat	gctctatcac	taaactacat	atccaaactc	acttcatttg	60780
tttgtttgtt	tttaggagaa	agatagtctc	cgtaagtaac	tatgtaacta	tgctttcaag	60840
tgtggtgctt	acccttctag	tgtattttct	atgctttata	ggcacaaacg	tatgcacata	60900
tgcctactta	aaaaataact	ctgcaagacc	ttttgcaaac	agaaataaca	tcattattct	60960
gcacctgatt	caaattcaga	agaggctgtt	cttgactggc	tttactatac	acataatcca	61020
gttataaatg	attaaagaaa	ccatagtaaa	accatacgca	cttacatggt	gcttttaaat	61080
tacaaagggt	tttctctttt	tttttttt	cccatgtgag	caggataatc	aatcggactg	61140
tgtcttatct	gggccgcatc	tacttacact	tctggagcaa	agaaacattc	ctcctgaaca	61200
aactcctgcg	ctgcacagac	ccccatctaa	ccagattccc	tacatagccc	agcaacctca	61260
cagctagctc	ttccatacac	cacatcatga	ggattcagga	ggaaggcttg	ggatgtccct	61320
tgtgcagact	tcccacggct	cagctgtggg	agcctgaaca	agtccttctc	agagattctt	61380
tttttgcctg	catctagata	gacatgagaa	agctccaagg	gctaatcgag	gagaggaccc	61440
ctccccagct	tacttagaag	gtctgaagcc	aagcataagc	gctaggggaa	aaaaagagac	61500
cagtagctaa	aacacaggtt	ccgagtcaga	acttctgagc	catttaatta	aatgactttc	61560
attagttact	gccaaaggga	atgtaaatgg	gtgcataggc	tgtatgaccc	taatcaggat	61620
agaacagcag	agggattcca	agatcataca	acgctatata Page	gccctcactg 45	gccagggaac	61680

PCT - Sequence listing for submission.txt.TXT 61740 gcctgcagcc ccaccctgag ttgataccca ctcaggatgc ctggctggct acagcagtcc 61800 tctgactaga cggtagtaat tagaatgctc ctttcactct gatgccacac ttcaagcggc 61860 taactgaact gcttagcaga ccggccaccg gcatctccag agcctggttt ctactggggc 61920 atctgagagt cccagaatgt ctgacagtca ctgagtgcta aagatgttat taaaagacaa 61980 gaaggaaatg gtaccaaagg cagatcctgg gacaaaggta tctcaaaatt acgcaacgct tttctccagt cagcacctga cagctcccat attcccacac cttggccagg acgcttacca 62040 62100 tcagctgcgc tgaaatactc ggggttcaca gaagcataca gcactccatt gcccaacctg ctgttatttc tgtcaaaaaa aaaaagatga aaaccaggtc aacaaatccc atctctatac 62160 62220 atttctgtaa ataccttttc ttttcctttt tttctttctc acgagttatc ttgagcaagg 62280 gacgcaaacc atgatcactg ctgacgggac ccttgcctgc actcctgatc caggccccgg tatctgagga caaatctttc cacttttgcc ctggcctcag attagagctt ctaaagaaac 62340 62400 atttgtttct ttgcttcact ggaaataaca aggcccactc catgggaagc taaactggca 62460 tgcttggaga agctcttaca aggcagcaat ctgtgtgcta gaacagccag aaagcagacg acgggtacag agaaggaagc aacccctctc ctgttgctgt tagtcattag gaaatgtcct 62520 62580 tttttcccct ctgaagaatg tctgactagg aactctggct gtccagtctg catggtattt 62640 tcccccacag acgagctatg ttcaagttca aatcatcaag ccaatgcgcc acaagtactg 62700 tcttccgctg gcccaggcac tcacctcttt ctatggaaga catacagcat gataaccagc 62760 cccccaacga tcagcaggat ggcaaccggc agagcaatga tcagatgcat gaagttctca 62820 tacgtcgctg cagagacaag gaagaaacag gaagacgtca cgcacgaggt gaataactgg 62880 ctcacttcat ttctgtgtat ggttggaagg atgataaaac cgcctctgga atagccttta 62940 ctccctcatc tcacaagagg agtcttcgag gagtcttcta gtgctgggac aagaccagca 63000 gacaaactga attgtttgga gaaaggtaaa taaatacaga ctgaagcaca cactccttta 63060 aagcactgca tattctgaat acagcaagta attctgaagg caagcccttc ctgtgtgtag 63120 ttttgtggaa gtttagctga aggaaaatga gcagacactc acacacttac tagttgctca 63180 cgctattctt atcttttaag aaagtcccac agacagcttg ctcgccactc ccgtccccc 63240 aaagcactgg atgacactcc ctgccaatgt tgctctgagt gttctacaaa tatgtaaaac 63300 caattcaagt ctgaacttgc taccagtacc tgggtggtaa gtaccacagg atggcctcca 63360 ggggttcagg tctacacctc tgaaaatcct gagaattctg ccagattcaa gaactcagtc 63420 tgtggacagg tggattaaca tggatgtacg ctgggcatag ggggaagaag agatggggga gcgagggttg cttcccctag ggaaacggct tcccgtgcag aggaatgtct tgcagagtgt 63480 63540 attgaatgat gaaggggttt ggttccagct aagtggtttc cgccccattc ttcagattga

	DC	T - Sequenc	o listina f	or submissi	on tyt TVT	
gaggagtcag	tggtcagcag					63600
gttcctcagt	atgtaacact	ggcaccttga	tctggggaca	accaacagct	gtctaagtgc	63660
actgaaggcc	tgagcactgg	gaggaaattc	ttgcccgatt	ctgtaaacct	agctgactct	63720
ctgtagtgtc	gtggacacta	gagaagaacc	tgctactagc	acttttctga	agcagtgagc	63780
ttctacccac	agataactag	ctctcaggcc	tcgccagaga	agcctctttc	tgcagcagat	63840
ggaaaggatt	agagaaaacc	atgactggtc	aaaatgcagg	gaaccactga	ccatggggta	63900
cccatgccca	actgatgata	gacccacacc	acaaccccca	caacaaatgc	tcatggaaca	63960
ctgcaaaata	agtgcgtggt	acgattctaa	gatccagaag	cccagggtgt	ctgctgaggg	64020
atgccacctt	ttatgtaaga	caccacccgc	atgcgtgaat	cccaacaacg	cggttaccta	64080
aacttgcgta	atgacaatac	cagttcacat	gctttgaagt	gtggggaatc	tctgaagccc	64140
cacccctaga	tgagaagtta	ccagcagtta	atggctgctg	agagagaagg	aggatcagtc	64200
tttatcaggc	ataagcttgc	tgataggtta	gccaatccca	cgtggtcatc	cctaaacaca	64260
tacatgtacc	agtaacacta	aatgagcttg	gcagagcatg	tgtgtatatg	tatgtaggtg	64320
tatatgcata	tatgtatata	gacatatatg	tatcaatgtg	cgcacaagtt	gcttagcaac	64380
aataattaaa	gtagtcatgg	aactgagaga	ggtgggcatg	gaagaagctg	ggagagggag	64440
gagccagatg	gtgtaaatac	agtactcatg	tcagaagttc	taaaaggcta	aaactaaaac	64500
aatgaagaag	aagcatcagt	gaactcttcc	aaggccagac	tgaaaacgga	ttcatgtact	64560
gggaagatga	gtgtgtctga	ggacacactg	ggggcctctg	cacactgcca	ggtctagagg	64620
agttaaggga	acgtaccagt	ctcctgtggc	atgctatgca	tcgctccagt	cagacctcag	64680
gaagaaatcc	ttttccataa	gcaagatcag	agaggcgtcc	taactttgcc	agggttgcac	64740
ggataactga	caagttccaa	agtcagagcc	tggctttcct	gcagccctgg	ctcagaacag	64800
ccgcaaccca	gtaactggga	ggctggattc	ccgtcatgta	ccagaaagaa	tcagtaagac	64860
tccagttaat	atgggaaaac	aaacaaacaa	aaatgagtat	gcggagaaga	agaagcgaag	64920
ggctgtgagc	tttcatctga	gagcccaacg	gaatgcagat	cagggaatga	aacggaccga	64980
agtgcctcca	tgaaagcact	ttagatttca	ggcttataag	gagtctatag	caactattgg	65040
acacccaagt	tgacatgtct	acacaataag	gatggcgttg	tgggtaaaaa	cacttgctat	65100
gttaccctgg	caaccagaat	tcaatccctg	gaacctgaga	atcaactctt	caatgttgtc	65160
ctctgacctc	tgcacatgtg	cacaccaagt	acacaccaac	agtatagaga	tgtctccttg	65220
gaaaggagct	ggggactcag	tggagacatg	ttcctggacc	gcgagccact	caccaatggt	65280
tggtctacct	ctaaactcta	ttcttaatcc	tgaaatacta	caaaagccaa	aattaagtct	65340
ttttcaaaat	cgatgggatt	cagcaccttc	cagtttctaa	aagtactccc	acgtgcgcct	65400
ccctgccaga	gagaagctcc	gagctttcct	tttcccctag Page		ggttttgtgt	65460

PCT - Sequence listing for submission.txt.TXT tcctgattct acgggtcagg ttgttctgtg ttctttttga gtttcacatt tcaacaggga 65520 65580 cacagaggaa ctggaacaca tccagaagga caaaactgac agaaaattgt ctatgcaact 65640 ggctttcaag aaagggccca aagacctgag aatatttaat cgggagggaa gaagtctgaa 65700 gaggagttta atagaattca cgcaccaaga tttccttaaa aacagcaggt gatgccgagc 65760 tttcaatgtc cccctctgag gattagaccc aagaaaactg tgctaaactg cgtcttgtcg 65820 gacaccggga aaatttccca gaagccaaga gcgctagcac gcagcttcaa tccccctgtg 65880 ggatgtgcca acttccactg gagaaacccc attagaggac ctcttaagag tccccagtgg 65940 cattgcagtc ttagctttac aaaggcagct acaaacatgc cctctcctaa gaaaagccag 66000 actcacttag cttcagaagt caagactgct ccttcagaga acaccaccca atttccagaa 66060 ctccagtgtt ggcttagtag cacgacgtgc tacagataag cggaaatgta ccccaaggca 66120 gagatgctca gggcttcgtt gccggcctgt gacgttattg ggaagtagtg gcaggtaacc 66180 ttaggagctg ggttctagag gaagtcaggt cactggaagc aggtgtcctg tgagagaact 66240 gtgaaacccg ggccctttct gccttttgga ggtaaccagc ttggttccat catgtgcttc ctgcttctga cattttgtct cagaacagcc caaaagtaat agaatcaaca gacagagcac 66300 gacaaccccc gaaactgtgg gggccacccc tctaatcatc tctgggtttt gccacatcgg 66360 66420 agagctacag taacatcaca atggagagtt agcacataag ctaactgatg acgctaggct 66480 acccagaaaa aaatgagaaa attcagagtc tacctgacag aactctcagt ctcatcatct 66540 ctcaatctag acacagtagc agcagataca gggaatccta gcttcctgct tacggttcta 66600 tttacttctg tctttgtgca gtcacgatga ggattttcga atgtcttgcg tatctttgaa 66660 tatctggaac tggctaggtg ggctatcgaa gtgtgaactg acataaagtt atacatgtat 66720 acatatttac cacatacaac atatcttaaa gcatgtgtac attaacccaa tcagcatcag 66780 cattaagtcg cattgttacc atttctgtgg tggtaacact ttcttagcaa tattcaataa tgctttatta accatagcta gtgtgttata aagctcactc ttctatctac ctaaaattgt 66840 66900 gtaccttttg agcaacaccc cctaagttat gttcccctgg taacctgcaa gactctgagt 66960 tcaccctttt agatttattt catatatacg tgagatcacg tggtgtttcc ctttctgcac 67020 cttctattaa cagtattcca ttacatatat ggaccacatt tttacccagg cacctgctgg 67080 aggatacttc attgtttggc tactgtgact agtgggccaa aaaaacaagg ggggtgtaga 67140 tttcaacaca actaacttcc atttcttttg gactgggatt gctggatctg ttgagacctt 67200 gtctgaatca agaatccaga agagaccacg aagaacataa gacattagga aacaacagtt 67260 ccccacaccc tagattctag cctcaaagct gagctgagat tttggggggt ggggagtgca aaaggaattc acatttgatc ctgtatttgt ttggatatta catgaacacg aaataatcta 67320

aaaaaatttg gc				or submissi tgtattattt		67380
actcaatttt tt	ttttttt	cggtcaaaca	agcatgcagc	ccttgcattt	aacatttcac	67440
aacatttact tt	taaatctg	aatcctaaca	gctcactcag	tggtttctgt	gaactgtgaa	67500
acattatcca ct	agggtggg	tctgtgcaaa	ataacgcaca	gagtatcttt	caatgcatcc	67560
tggtggatgg tg	aagagcac	agaggagggg	aagactctga	ctgggatgtt	gtcctgcaga	67620
ttcctgtccc gg	agcagtga	caccagacga	tccctgggga	gacgctgagc	gctgggtcac	67680
cctcaccgac ca	iggcaggag	acctgatact	caactcaatg	ctttgcaaaa	tgcctccaca	67740
cctgagccac ga	itgagaaca	agatatcttc	taggttgtac	gatactcttc	tgttactcac	67800
aagagaaggc to	caaggctc	agcaccttcc	cagctctggg	atgtgcgtgc	gagtgcacgt	67860
gcgtgcgagt gt	tggggtgg	ggggaaggtg	atggtggcac	agatgtgtgt	ccactgtgag	67920
taaataccaa gt	gtcttcct	ttctggcgtg	acacctccgt	tttctagata	cggcttctcg	67980
ctgaaagcaa ag	gtcaccaa	tggaccattc	tggctagcta	gggatctgca	aaactttgac	68040
tgtcgatctc ct	gagcaccg	aggaagcaca	ctaccgcccc	tggtttccgt	caaggacttg	68100
aacttagatc tt	taagcagg	cactttccct	agtaagccac	ctcctcaacc	cagccagctc	68160
tgttctaaca ga	aaaccaga	gagccccaga	agctcagggc	ttctgagttc	tggcccagcc	68220
agctttgaaa tt	taccgtgc	gtctccctca	ataagactta	cttttggcgg	ggacatagaa	68280
gaacacagga to	tgtccatg	acccattccc	agagagggag	gtagcctgaa	tccgggctgt	68340
atagttccct gg	gtttagac	ggttgagttt	ggcccctccg	tacttcctgt	actcctgtct	68400
ggacacacat tc	ccgctgat	cctatggaaa	tataaggcgt	taatttccta	caagcatggg	68460
tgagatctga ca	tctgtcaa	ctcaagtcat	catgctgtga	ctccagctgc	ccaacctctc	68520
cttacattgt cc	agagtatc	aacataaagg	aagcaaggat	accggaaaag	tggttttcag	68580
gttggcacat gg	aaaatggt	aatcaaatat	gttggtaatt	aaatcaaata	tgttggtaac	68640
tccagaggaa ta	aaagatca	tcaagacgtg	tctagtctgc	ggctggaggc	ctagctacag	68700
tttcattgtt tg	tatgaagt	ccagccagct	ccatgcaccc	aagttactac	tcaataaaga	68760
tggcgttgct ag	gaagacct	ttatccttcc	cgactgccca	tctttctccc	ctgtctgctt	68820
agcagtcagc ag	acaaccag	tatgccatag	cacgtgctct	cagcgctgaa	acacatgcag	68880
ctgcaggcca tg	gtatccct	cttacctcga	cttgcgaccc	gtatttaatt	tcatacatta	68940
ggatcaatcc gt	tggggttc	tcgggttctg	gccactttaa	aaagatggag	ttttcgggtc	69000
ttggctccca gg	tcaccgga	ccagggatat	catctgctcc	ttctgcataa	ttaatgtaaa	69060
caagcagtca aa	ttgggttt	aggtccccag	aaagaatgat	aaacggtgtg	ctaacttgag	69120
aacaactgtt cc	cccaatcc	ttgtatatac	aggactctgg	acaggggacc	ttgtaggagt	69180
tctttcctga ga	tggctgct	ggcacagcgc	ctccatcccc Page	tctgactgaa 49	aaaacctgtg	69240

PCT - Sequence listing for submission.txt.TXT 69300 gccaagtaca agtgatcacg cctgaaaaac ctatgtaaca ttctccaggt ccattttcct 69360 acctaaaaag ttaaaaaaaa aaaaaaagaa cccttcaaac agagcggccc tggggaaggg 69420 cagtgagcga cagcgtgctg agcctccagc tgtggcactg acacattcac agcccacacc ctcacacggg agggaggaag ggccagttcc gaggctggcc tctgaggcag ctgttccggc 69480 cactgtctct tccagccacc gctggcctca cttctggtgg tgaaccacag ctgttgggtg 69540 69600 acagctgatg acagccgaga gaggcctggg gagataagct gttctctgtc tcttctagga 69660 ttgggaaact gaggcacggg tggctgaggg ctacacggga gtgccaaagc cgatctcaga 69720 agetettact geceeagtte eeageatget ttgtteteee caetgaetga caeeteetee 69780 acgaatgaga agtggcaaat ggctggcagg gtgacaggca gtatctaact gtaggaggag 69840 gcccacaggc tgatctagct gaccacgagg acaacgcttc ctctgcatca agctttgaga cctggagggc ccctcacagg tctgtggtgt gctaaggcct ttgtgctctc agtctgtagc 69900 69960 ctctggcact gagagaagac aggactttag gagattgggc ttcaatgaaa gaagtgatga 70020 aatacgatgt gttgcttcat tgcaagcccc aaagcagtga gaggcaagtg cctgtggtct aaaactcctg aaacactgag accaaaataa acctttcctt ctggtaagac aactgccttg 70080 70140 ggtattttgt aatagcaaca gaaagctaac tcattcagct gtgcacagaa gggcacaggg 70200 gtgggtgtga gcatgtgcat cgtgaaccaa gccaaggagt gagagccctg aaaggggctt 70260 gtaaagagtg tctatggtta agtctggatg ggagctggca ctaggaatac attctctgtt 70320 ccttaggcac ctgacggacg acgttgtgta ccaacaacca cacattcgta ggcctgaatc 70380 taagggctgt cagcctcccc cgccttggct gtaagttggc ggcggggcta cctgccgtac 70440 ctgctggcat ggttctcgca aagacgaagt tggaggcgct gcagcccagc ttctcagcct 70500 cgtggttgca gctgtggata tcgatgcggt acagagtgaa aggccggagg ttggagatga 70560 cagtcctctc cttgttatcc actctgctct caaagaaagg gtactctgtc tcgaactcct 70620 ccgggtctgt gatattgtag gtgtcagcta ccgtggtgtt cctgcttcgg ctggacatgg 70680 tcgtgttggc cacttgcatg acgtctctcc gcctcctttc gggcctgcaa ggaggagaaa 70740 gaaggtcagc tgctaagttc tttagttttc tttgtctttt ccatggctag ggtagaagta 70800 ataggaaagt cctagccttg aactaaaaga aactacttag gctccttgga taagaaccaa caaataacca ggattttcgc cttcacaacc catcctgtac tctcttgaga catcctcaga 70860 70920 gaaacatgtg cacacatggt tctaggaaac agtgtgccag ccatttttag ccagacagtg 70980 ctctgtttta ccagacagtg ctacttggtc aggcctgata actgagcatt caacacgaca aaccatcagc ctcataagac tggttgggaa aggtgaggcc taagacacac aaggtagaag 71040 agacccaaag tccaacagta gtggcttctt tgatcttctc tgaaatgaag atgccctagt 71100

ttaagcagct	PC agcaagtacc	T - Sequenc taaatcccag	e listing f cgcttttcct	or submissi gaggaacagg	on.txt.TXT gtctcctatt	71160
gatgaatgcc	cccagtccct	agtacacagc	atggtcttgg	aggttcatca	aacctggctt	71220
tgcatcctcc	ttggcagtga	gcttgtctgt	gataggagcg	gagcctctgt	tactcactga	71280
cttgtgttag	cttaagaaac	tacagaaaag	caacaggaac	agagtctggg	gctccctctc	71340
ttccagaaaa	aacttctaac	attcataaaa	actgaaaaaa	aaaataaata	aaaatatgac	71400
atcagataag	cagccctatg	ggctġgaagc	aaccctcagg	ttgtctgcag	gtgaacagtg	71460
ggcaagctgg	gtattgaggc	tgttgctggc	attgcttgtg	acaggacaaa	ggatgagagg	71520
aacaggtggg	actgcactgc	gtctggtaag	aacatgacag	agtaagacaa	aagggagcct	71580
agagtacggt	gctcgaggcg	ccttggaagc	catgcccaag	gcctatggat	gctccctagg	71640
ccaacatctg	ggagagtaca	gtagggagtt	gggggaaagg	gccgcatgct	ccctggtctt	71700
cagcagatgg	atctgctacc	aaaaccatag	ttctttgtcg	ggtactgaca	tgccagtttc	71760
cattgaaagt	atatcaactg	ccataccagg	gcccatctca	aaagttagga	atggggattt	71820
gttatcataa	tgctggggaa	agagatagga	aatgagggta	ctattctacc	atgctcacac	71880
ccagcaaacc	ataaaccgac	caatcaacaa	accatggaag	gaaagataaa	ggaaactact	71940
ttttcaggta	tgtgtgtgcg	tgcatgcatg	tgtgcgtgcg	tgtgtgtgtg	tgtgtgtgtg	72000
tgtgtgtgtg	tgtgtgtggc	ggctaggcag	atgttcaaaa	cattattatt	aaatttcctg	72060
cctccctttc	aaaccagagc	aacacaaacg	tgtgccttca	tgtaagaagt	tgcttgtgtt	72120
tgatttattg	caaaatgata	ctggtccact	tcttgccttg	acccaccccc	aacaaactgg	72180
gctatagcac	caagcagact	cagtggcctc	cttacttata	aacactgcac	tcttgcatat	72240
tattcaacag	ttactgtgga	cacagagtca	ggaccatgaa	gggaggcaat	ataggcatca	72300
gaaggctagg	gatgattcaa	acagagtggt	ccagggggtg	gcaaacagca	cactatcagc	72360
tttccttact	ccataaagta	tcctgatgct	actggaaaaa	cttgtactgt	ttaacatctg	72420
agaatgtttt	agtgacagaa	acatttttga	agcgtcttca	aaaatgaaga	tggcggccaa	72480
tgaaagccat	ttactgatac	caagtttagg	aagtaacttt	ataaatagta	gcctccactc	72540
tactataaac	tcacaggcaa	agtcagacaa	tgcagaaaga	ctaaatctga	tatatttgcc	72600
ttcagccccc	agataaacgt	gcacctagaa	tgacatgaag	gtaggaatag	gttttaggta	72660
aactcggttg	tatgatgaca	gagttgctcc	tgtcatctag	ggtgctcctt	tatgggacct	72720
tgcgagacct	cgtatagatg	tcagatcctt	gcctcggtag	gaggtaaaaa	acaacccccc	72780
aaaccctaat	ggccaggtgt	ggtgacccct	atctgcatgc	tgggtctgtt	ttaggacact	72840
gaggtgagga	cacttacacg	aaggaatgtg	accgagagaa	aattcgtttc	aaacccacag	72900
tacaagccct	gcacggtccc	atctgggtca	accacagcct	tgccgcccaa	tcacttagcc	72960
tagcgttaca	cagctgatga	taacagcagt	cacaaagtga Page	tgtcatctga 51	gtataactaa	73020

PCT - Sequence listing for submission.txt.TXT 73080 acaccaaggg ctttctgcta tggtcggtct acccttggtt ctcatgctgt attgttagat gtttggtcac tagtggggca gctgcaggag gaacctttag ggaatggtcc tgttaggggg 73140 73200 agatcctgat gtagcaaaca agctaagtgc tcaacgtctg ttcagcttcc tgtctgccct gaaatcgctg ctgtgccata agtactttgg ccatgcgaca cacccaaaga tgccttcatc 73260 aacaaaagcc acactggctc cttgttcttc taactttaaa actgttgagc tatgcacacc 73320 73380 actaagcatc acgcaatttg ttagcaacaa tgaaagaacg acctaaacct ctggccatgc 73440 ctacaggagt cctggatttg actgacaccc agtatagggg tgggtatggg aggacctctg cctggcctct ttgggacgct ccatacctgg ccactctcat ggctactctt actgagtgtt 73500 73560 ggttcaggtg gaatgctcca catagataac ccaatgaagg gacggaggtt tggtgttgga 73620 gaatgtaggt ctgagaccca agactcaaac agacagtaag ttagtgagga tagaggtcac 73680 tgcatccagt ttttaaagca ccttttgatt tgtttcctgt cttcaggtct ttaaattcaa 73740 agaaacagac atgacacaga ggggaacatg ggtaaaagcc aaaacagcag cgcctcctgt cagctgactg caatagcagc ccagcagcct gccaaccaac aggagctgct ccgcgtgggg 73800 cagatgggag catgcacagc ctaaggcatc aaatgtagcc tttccaaagg gcacactcac 73860 73920 ctgggcacaa agatggaatt gtgaaggaaa ttctcaaaga ctttacggta ctcagcctcc 73980 tccttctcag cctgcttctc agcttcagtt ttagggcaag cgcagcatgg ccctttatca ccaccacaca cttctgtctt gggattttcc gtcacctcct ccacgtcgat ggtaccatcg 74040 74100 gcgtactttc tgatgggtat tttgtctgct tggggaagac cagagatggg aatgaaagcc 74160 74220 agaagcaagc cctgcaacgt gacaggtgtg accctggggc tcaggttctc tcagacaaca 74280 gacaaggcca gtggcactgc ctgcctgctg cctgccagcc cccagctcac ctttggagca 74340 gtagttgtgc cggtacaggt aaccatcctg gggctgccgc tgccacctca caatgtagta 74400 actcaagtta ccattgggca gagttggagg attccacttc acaatcagct gagaggaaga 74460 gtttgatgct gagaggacat ctaggggaat ggaagggact ggaaagaaga acaaagaaca 74520 tttcagagaa tagaccggaa tccgaggttg aggttatcag gggctcgatg caaaccaaca 74580 ggaagctgca ggcttgacct gggcacagag atagcaacgg accaaccaga gcatgaggtg 74640 aaccagagct ttggaaagat taccaactgg gaggccagcc ctctctcaga gcacttgctc 74700 ttagataatc tatgtgcaaa cacacatggc tcactgacct gggactgaag gggctacgag 74760 ggcatagctg gggttaaagg ggactctaaa aaaaaaccta gagttgattc agttatgaca 74820 actgtcattc tccggtgtgt attaggaaat ggcaaattgg acggcttagt acttcacctg

tgattgcaag ttttaatctc tgataaaaac ttgataaaca tgacagggag ccaaaatgaa

74880

	PC	T - Seguenc	e listina f	or submissi	on.txt.TXT	
gagtgggagt	gggggatgga	cagtgtgtgg	ggtggttatg	tgcctgggtg	aaaggactgt	74940
gaaacaagga	gcagggactc	acagatcttg	taagcaagtc	atgattcagg	aaagccagta	75000
cgcctgagcc	ctgattctat	gcaaagtcct	gttacaagca	aatgagttta	acaaaacgac	75060
ggaggcttac	atactactga	tgcccaggct	caaaagtaga	actaacttac	gtaaaaagga	75120
aaacatccca	ggaccactgc	tgtgtcctca	ccatagcaaa	agagatacca	cagccgaagc	75180
gcaccccatc	cccaacacac	acacatgcac	atggcaaaga	atgaggccca	ctggttttgg	75240
cagtttccaa	agtgcaagag	acagaaccgt	ggttatgaca	cttaagaata	aggtccaacc	75300
aagctgtttt	tgaatctgaa	aggtgaaaac	aagcttgtac	cggtcagtct	tatgacaact	75360
tggcacaacc	tatctgacag	aaaaaaacct	caactgagag	gatggctcag	tatgatcagg	75420
ctgtaaggca	ggcctgcagg	gcatcttctt	aactaatggt	tggtggagga	aatgcccagc	75480
tcattgtggt	gaggaggcct	ctgggctggt	ggtcctgggg	tctctaagaa	agcaggctga	75540
gcaagccact	gggagcaagc	cagtgcttct	ccaaagttcc	tgtctctgct	ggagtttcta	75600
ccctggcttc	cttaacggca	gactgtgatc	ctgatgtgga	agtcaaatcc	tttccttgcc	75660
aggtcatata	ccaccacacc	aacaggaagc	gaatggacag	agggctgtta	ggatgtatgc	75720
ggtgctcaag	gctctgagaa	ccactgaggg	acaacacgtt	ggaagaccaa	gactgatgca	75780
gagaagacaa	gcacttgatg	cctggtcccg	tgagcgtttt	caataagtat	ttccaaaaca	75840
gtttcttact	aggtatttca	atgacaagtt	tcccagatga	agcagaggca	catgatggac	75900
taagtacgtc	actatcggtc	ccaagcactt	ttgaggtcag	ggaccaaatg	cagtttttaa	75960
tatttaggaa	gaagaatagg	atttcttaag	aatctgctat	aatgataaga	aattcctgct	76020
tagtttttt	ttttttcctc	tcagatctgc	tgcaatgatt	cactgggagt	cattactccc	76080
aaactttaag	atgagaaatg	tattcagttg	ctttgctctt	ggaacggtga	atatgtttca	76140
ttgtgttgta	agccactcaa	gtcgatggaa	ttttttgttg	taagaggtca	gtcattatct	76200
ttacagtgaa	gcatatcttt	ctacctctct	cgtctttgga	tacaaactca	cacctttgct	76260
tttccccact	tctaggttct	ggagctgggg	aactagtacg	taaacacatg	aagaagatga	76320
gaagggatta	gtcaataatc	cgatatcata	gtactctaag	cctgcgttcg	cctgttgaga	76380
aagctggtgg	ctacggaata	aaggtggaaa	gccagcaagc	cactagaggc	aaggggtgca	76440
ccggtcattg	tcgtctcagt	ccctggaagt	ctgcactgag	agagaggaga	ccagccacaa	76500
gtggctacat	cctgggcatt	cagagaaacc	atcctactgc	tctggaggac	accgattcaa	76560
ttgcgtagag	cagagatgtt	gacatttaag	atggtaccaa	gtctaggaaa	tggctcagga	76620
gaacttaagg	tgttggcagt	gagaatgtta	atacagtgtt	aagcagcaac	aacaagcatc	76680
tcattgctag	ccctccagcc	atactgtgcc	tatgtaaata	aagcaagctt	ataaaaattc	76740
agggaacagg	ggttggaggt	tgttcctccg	gtgcgtggat Page	acctgaagca 53	ttggtgcgaa	76800

PCT - Sequence listing for submission.txt.TXT

tgtacaagat	ttcacttttg	gccccacgga	tatggtcgtt	ttccaccatg	gtgagggtca	76860
cagccttgac	atagacagca	tactgggtcc	agggcttcag	cccatgcagt	aaaatgccag	76920
gctcgccctc	cttgttcgga	ggcaggtcta	catccaccat	gttccagctg	ttggagccac	76980
aggcatcctg	cccgtcatat	tccgtaacgt	ttttaaatgg	tctgaaagac	agtcaacaca	77040
ggccagagaa	cgttgaaggg	ctctggcatc	aaaactcccc	agaaccttcc	ccaggggctg	77100
aacgtgtcac	actttctatt	tctattggga	actccaaata	aaactcatca	tcaattagat	77160
ttctatacaa	aaataaaatc	aagcatctgg	actcgggagc	tcgacagcta	tgaaccgcag	77220
aactgacaag	cagccttaga	gacagcaagt	ccctcattca	cagggactga	aaatgctgcg	77280
tctaagacat	gcggatgctc	attgtcttct	taagtgagag	ttaaaaacaa	caacaacaac	77340
atcaacaaaa	acccaactaa	tgaaaaaaaa	aaaaacaaaa	aacaagcaga	gctgtttaat	77400
gcaaacaata	aactaataaa	acacaacttt	tggacaaaac	taactttcct	atcccctag	77460
aactctaaaa	tgtaattcga	taatagccat	ttttatttat	ttttatttt	acttttttgg	77520
tttttcgaga	caaggtttct	ctgtgaagcc	ctggctgtcc	tggaactcac	tctgtagacc	77580
aggctgacct	cgaactgcct	cccaagtgct	gggatcaaag	atgtgcacca	ccactgcctg	77640
gctcataata	gctattttt	ttaaacaatt	tttttagtag	atattttctt	catttacatt	77700
tcaaatgcta	tcctgaaagt	ctcctatacc	ctcccccgc	cctgctcccc	aacccaccca	77760
ctcccacttc	ctagccctgg	cattcccctg	tactggggca	tataatcttc	acaagaccaa	77820
gggcctctcc	tcccaacgat	ggccgactag	gccatccttt	gctacatatg	cagctagaaa	77880
cacgagctca	gggggtattg	gttagttcat	attgctgttc	ctcctatagg	gttgcagacc	77940
ccttcagctc	cttggatact	ttctctagct	cctccattgg	gggccctgtg	ttccatccaa	78000
tagatgaatg	tgagcattca	cttctgtatt	tgccaggcac	tggcatagcc	tcacaagaga	78060
cagctatatc	tgggtcatgt	cagcaaaatc	ttgctggtgt	atgcaatagt	gtctgcgttt	78120
ggtggctgag	ataatagcta	ttttcgatgc	ttaactatct	cataatattc	caacactttg	78180
tttcctgatt	gtctcagaga	gtggcattgg	tgataccacc	agttagcatc	gccagtgcac	78240
tggcagcact	ttcaaaggga	agggagggct	ctgcacagat	gcatggtagg	cggggtgtct	78300
actttgacga	gatgcaaggg	ctgctagcta	ctggcttctg	aaattatgct	gacatgactt	78360
gtgttcgatc	acgatgggag	aggggtggcc	cccatttaca	caaacactga	gtgattttga	78420
gctttctatt	ttccctgggc	tataacagtt	cccaggaccc	taggtcaagt	ggcagcgaag	78480
ataccaggca	ctgccaccag	cacctttgct	tctggaaaga	tcagtgcctg	ggaaaacgga	78540
tgaccacaca	gactggggaa	accacctggc	cacaggaggc	tgagtaggaa	aatgggacag	78600
ctcaggaagc	tgtgatgtgg	agtaagcagg	atggtcctat	caggaactgc	tgacacctag	78660

PCT - Sequence listing for submission.txt.TXT	
gttcgtccct cactattctt taatgctaga gggctcatgg cccagagcaa agtcttggca 78720	: 0
aggccatgca tgcatcaagt gactggaaga caatgggtca gttcagggta gccttggtga 78780	:O
gaacagagca ccccatgggg tattttgggg gacagaggct aagacaatat ttaaccaagt 78840	,O
ccacataatg gcttatgaca gtttggaggc attcagttct cttaaaattc atcccctttc 78900	00
cccttggggt gaacttactc aaacaccata taaacaatga aagggctgag gcgggacact 78960	Ю
ctcctgacta gctgctgtct caggttggga cagtttaata tgacaactag agaggtcaca 79020	: O
tgaggatgag gtgacggtcg cctgacttga ttctttatag gtacaccaaa gactctctat 79080	O
tcagccaagt cacactgcca cctggccgtc cccaccctca agcttgacat cagagtgaga 79140	,O
ggcccaaact cacgcctcct tgtagtaaac tgtgaagctg atgagatccc ggtagtccgg 79200	ÒÖ
cggccggtac cggtgccacg ttatgatgat tcggttcttc caggtcgtgg tggaggtgaa 79260	60
acggagaaca tcactttcac ctggggcaca gaggcacatc catgagtgac agaaacccat 79320	: O
ccgtctctgt gatgtcactc tgagagaaaa ccctgactgt gcttccaaag gcaaatctat 79380	O .
ggctggcgca ctcatgacct gtcaggtcag gctggctgcc cctaagggag aagccctttg 79440	·Ο
aaatgctccg atcacaggct tctgctatgt tcttgatggg gaacaggtca gggggctctg 79500	00
cagaaaggtg agggtgctgg ctgtgtacac acttaccacc tctgcctaac tactcttctc 79560	50
aagatgcctc ctggatccgt agagtatcag ataaatctgg atactcaaaa gacaaggcta 79620	: O
gccctcccc cacatgtatg cacacgtctg actagctgtt ggtcacacag ctcctgattc 79680	O
cccactaatg ctatataatg acggagggtc aaatagagct ttagtatttc tgtttgtttg 79740	,Ο
tttttgtttc cttaaaacag ggttttagat gtagcccaag ctggcttcaa actcacaatc 79800	0
ctcctgcctc agcctgttaa gtggtgagat tataggagtg taccatcatg cctagctcca 79860	Ю
tacagtgcta gaggagagac tgacatccag gtctgggacc acatttggag aggggctggg 79920	: O
ttaacaggtt gaactctagg ctatgagatc ttagggtgaa aactctcatc accaggatgg 79980	O
aattattact ttgtccaaca tgtgaaaagc attccgattc aaagacatgg gctcactttg 80040	.0
ttctagaagg agcagggcag agaaaggagg ccaagtgtga ggacaaggac actggacgtc 80100	0
cacggaagta ttatagtgga gcatctaccc tgatccttct atggcacagg agagaaaggc 80160	50
agagctgacc tggagtggac tggctcttcg gtaaatattg tttgctcata ttgaaaaggt 80220	:0
atttaactgt gcaagctcta agaacctgct tggatgttta atagactcaa atggaccctt 80280	0
agaaaaatat atcagtatga gtgtatcagg cacccgccca ctaatatgca gaggccaggc 80340	· O
actggctgca gtggtttgac agtccatggt gaaacaaaga gcccgcccac ggatgccaaa 80400	0
gactgttatc tggactgtgg cagtcccagg ggtctgagat gctgtcactc acaggaagct 80460	iO
cgctctccgt tgttcctggt gtttatgtcc cctttgctct ggcgtccctt ggttccggtc 80520	: O
acttcctcca tgcggtaaat ttcggagaca cacagcttgg gattgaaagc aaagtacatc 80580 Page 55	O

PCT - Sequence listing for submission.txt.TXT 80640 tttccggacc tgacggtcag gttccggtgg ttccagtccc acagctgctg caagttctgg 80700 ttgtctagga catagaagga gtagttcctg gaagcacaga aatgcgcatt agcaacgcac tgagcccaca gcccctcag gcgacagaga gcctctctgc ggccagtgta gttccatacc 80760 80820 aacaaggggt ttgcttgctt actggggctt tataacagca gacagtggcg gtagccactg 80880 gcaaaaagat gtgccaagga caatgttttg aaatcgactg gacactaatt aatttcatga 80940 cctctattac caacacacaa agcttctccc accaaaggat gttccttgat tcattccctg 81000 ggaaaatgcc tttggttatt tctctcagag ccaggtatgg acaatgtgct tgaaatcagc 81060 ctacaggcga acagacatgc tccgctactc aaccggaaca gcttacatac tagcagcaaa 81120 ggctgccatt atccctagga ataaatccta cccatgccca atcagcagtg catgatggga 81180 tgggagacag cctggctctc tgtacatttg cctctcgctg caagaagcct tcatttcagt ccctgagtac gtgggagagg acagacatcc agtgtctccc tgggctctca catcagggta 81240 81300 gctagatgca gcgtgtaaca tggtggcttt ccacatttag tatgtacaca gcttgttctc 81360 agtatcccct accgctagag cttctggtgc agaggtccag agtgcaccag gaatctcgat gtctagcagg taatgctgat aaacaccagt cctgggtcca cccagaaact accaggccgg 81420 81480 ccacggcact gtttccaagg cctaacttcc actagagggg agatatgggc atggccaaag 81540 ggaagatagc tatcttaggg ggccaagggg agagcaagga ttctacttgg gtgtctgcat aagttttttt tttttttta aacagttatt tctaaatcca cccacagacc agacaaacat 81600 81660 gtcccaaagt cctgttctgc cctaaaggct gtgtccacct aggcaccacc tgctgagagt 81720 cctcacccac attagaacta ctgcctaggg ggtctgcttt caacatgacc ttcacatact 81780 gagaaatgag ttacagctgc agggttgcca agcctctccc gacacttcct ggagaactca 81840 ttagggagct cagaggccag gacccaggac cggaagagcc atgaattccc cacaggacaa 81900 gccacaggca gtttcctcgg tgctatgaag agcagcgttc atgtgcgtag gtgaagtctg 81960 aggtctcgtt ggttttaaga ttccttatga gagccagtga gatggctcat gcgtgcaaga 82020 gtacttacat cacaagtctg gtgatcagga ccccgagaag gaagaacagt tactgtgtaa 82080 ggctgtcctc tgacctctgc acatacatcc ctctcatagg taagagtcct cacatggagg 82140 agtcggagct caagtgtgag ctaagcagtt gaatggaagc cccaaccctc cttgagcact 82200 tctgcgcagg cttcagcgca gggtctgcac acgcacgggc tcaatgagcc gctagccttt 82260 ggtaaggagt gttcccctac catgcttgtt tattggagta ggaaacaaag accctgatca 82320 aaggaatcca gatcgtagta cctaagagtg tatgtcctag ggaggtcctt ggatacctgt 82380 cagtcagaac tgccacctac gggacccacc aatgttcact cttattgata tgggggtggt 82440 caggataggc agacaactga aggataggtg taatggtgga aagattgggt cccattaggt

P	CT - Sequenc	e listina f	or submissi	on.txt.TXT	
gtcttgccta accatgggc					82500
gctgctccca agtcttgaga	gtcccaggag	acaaaaatct	cctgttattg	aagacacctc	82560
caggccggat acaagggcca	actaatcagg	tcaaactccc	atctccatct	aggccaaggc	82620
ctcttagtaa actaatttc	caagcaggaa	acagaattgt	actgaaaata	ccttccttct	82680
gagccacaca ttcttctccc	cagggaggga	gcatgaatta	gaaaccagga	atttgacaaa	82740
tgaatggcag gcacatagaa	actcagggta	tttgactaat	cactttgaaa	agcaagatta	82800
tcttttcaca gtaaacacaa	actttctctc	tttaaacaat	gcagagaagg	ctgggagcca	82860
gaataccaat atcaataaaa	tccaggcatt	gtggagccta	cagaaggtaa	agaaaaataa	82920
aaaccttcac caaaataata	atcaacctgc	tggggagggc	ccgtccacac	agtgcctgct	82980
tcccaacccc cacccgaggo	ctgcctcctc	aacaccttct	gcaatagtga	gagttaagag	83040
atatccccag gtggagatt	gtctacacac	cttcaagata	ctaatgtcct	tgaatggtca	83100
ttgttttctc agggagatga	ctagttaagg	gaaccactca	ataaatgcga	cttcataaat	83160
cgtttctaag ctcactgcct	tttacatcc	acagaatatt	tttaaaaacc	aaactgttca	83220
tttttttcc tttggctcct	acacgctgta	tgatctcccg	gagttttatt	gagtggtatt	83280
ttggctctta gttcgatcct	tccttctttc	ctaccttcct	ttctgcaccc	ccccacccc	83340
ctcaagacag ggtttctctg	tgtagccctg	gctgtcctgg	aacttactct	gtagaccagg	83400
ctggcctaga actcagaaat	ccacctgcct	ctgcctccca	agtgctggga	ctaaagaaat	83460
gtgccaccac tgcctggtag	cttgtagctt	tttcaacatt	agaaaaaaaa	atcccctcta	83520
ttggatgggt ttcacctgco	aatgcataga	cctactagga	tggttagtca	acaatttggg	83580
ggccctgtca catgataago	tcacagccaa	cacttagcta	tgatctgtgg	ctaccatttc	83640
taggcctccc ttttaagtga	agactgcagg	ggaccgagtg	tagagtcttc	catgtaggaa	83700
ctgataacca ggcccaagca	ccttctccac	tgcttatgaa	gtggcacctg	aatggtttac	83760
tcagcttctc tagggctgct	ggttctcagc	tgcccatgga	gctatctttt	ctggtctctt	83820
cgggccccga ggccaattga	gaagaactgg	atgctaaata	taaaaggacg	ttataagctt	83880
tgaatcacct cacaaaggca	caggatgacc	tgtgctactc	tctgaactgt	caaaagtccc	83940
ccagaacaaa gtcacagaaa	ataggtaagt	cctgcacctt	gatacaggca	gggctgagct	84000
caaggtctcc agcctacaca	ggacccctct	ttcaagctct	tactggcatc	ctggaagcac	84060
agacaaccaa taactcatat	ccatttttgc	aaggagacac	tactactgcc	tgtgacagct	84120
gtctctagag ggcatcagaa	gccagtacac	tgaagctgtc	accagtacag	tcatttataa	84180
cactacttag cccatctgta	gaatattggt	tcacttcagg	tccacagtta	taccatctac	84240
aaaggctcag ttagtatgga	aatatatacc	caggcaaaac	taaaccaagc	accacataga	84300
ttgacaaaat aggccgtttg	ttcctgagtg	ctttttaaaa Page	acagctttgc 57	tgaggtacgt	84360

PCT - Sequence listing for submission.txt.TXT

tttaccttct	aaaattgttc	ccactataaa	tatacagctc	catgggcttc	aataaattta	84420
tacagatggc	caatcatctt	tcaatcatcc	agattcagaa	catttatatc	aaactgaagc	84480
cccccccc	attcttctcc	catccaaggc	atttcccctg	tctgttcacc	caggatgcta	84540
catgtaccat	tggctagtat	cttactgtgt	gttttgcgct	tatactgagg	aacccctaga	84600
ttatatctaa	cgcaccattt	tgagaaaata	ctatggaaaa	tgttgctaag	agcattcaca	84660
tgtgatattt	gcatacacat	gcttccatat	ctctaggaac	agcctagact	tgctaggcaa	84720
agtaactaat	tgtatgtatt	ttaaaagtcc	caagtatgtg	ctaaaatgtg	gttatgttag	84780
ggtctagttc	cagagatgca	gggcacatta	caaaaccctg	agtctgcaaa	gggtagagat	84840
gcctaaacag	actaagaatt	ctaactttat	actggccccc	ttccagtatt	tttgttctgt	84900
tcaagacaat	aatctttggc	agcacctaag	agcttgaact	tttcatttat	ttgattgctc	84960
ccaaaccaaa	gttgtccaaa	gcagagcatt	tttttttca	gataatggaa	atattttctc	85020
tcttattcaa	ggagaaccac	atatccctat	ccccagacaa	aacttgattt	tccttcttaa	85080
tccccccat	gacccccaca	ctttgctaga	gatcaggtag	caagcaccac	acactctagg	85140
ttaagtgctc	tatcactaca	ccacaccact	acttctgaga	aaaccctttc	ctttctgtgt	85200
ctgtccttga	gtacacagac	gtgcaggctt	ctggacacag	gagagagaca	ctgggcatcc	85260
tcctgttact	ctctacccca	ctgtcctgaa	acaggctgtc	tcacggagtc	tggctcaggt	85320
caggcaggtc	atctgactag	caagttcttg	ggatcagtct	gtctcagctc	accacctgga	85380
gctactcctg	ggtgcagcta	ggctcagtca	cgccgaggat	tcaaacacga	ggcctcatga	85440
ttgccaagca	agtacactta	gctagggagt	catctctcca	actcctatga	tcttatctga	85500
agttgggatt	ctacagctat	gccacactac	agagagagtg	atggctgaga	ccaaagggtc	85560
ctgctgctac	ccaagtaccg	ttctgtggct	gtgcaccctg	atgtctgctc	tgctgggatt	85620
ctgcttcacc	tgtcgtcggc	ctggaaatca	gtgtacagaa	atgtggcctg	atgagcatgc	85680
atgacccagg	taagcaggcc	cagaaagaaa	acacaggaac	tacacgccag	gcaaaacact	85740
tgtgttccca	cggggggcta	ccgagaaggc	caagatcaac	tgcagtgctt	tcctggatag	85800
ctaaggctga	aggatacctt	catgggggtg	gggggtgggg	tggggggaaa	tattcctctt	85860
tccatcaaga	cagaagtctt	cagaatcctc	ctgagccgca	cggaagcatt	tatgccattt	85920
tcagtagcca	tacaaaaagc	tcaagaaata	gattccttca	acactgagtt	gaggcaagat	85980
tgcttaaaaa	taaaataaaa	tataaaataa	aataaaaact	cagaagtggc	ctgggactat	86040
atacatttga	aggatcacag	ggatagcgaa	gtcatttcta	atctttgcca	tgtgccaaac	86100
atacacagaa	atactcagaa	agttactcga	gcttatgctg	gcaactcccc	caccccaagt	86160
tttctgtctg	acttggggtg	aggtgaacct	ggtgaagttc	cacagggctc	ccctttccct	86220

				or submissi		
gtaactgtga				ggaggggag		86280
gtataaacga	cagcaccctg	aaattaaatg	tcagataact	ctgctaatac	acccctcctc	86340
aaaatctcca	gtgcgtccca	aggcttacct	aaatgataac	ctctacatct	gcatgcaaca	86400
gtgcctccta	taatcctagt	actgcctacc	tcccccagga	gctgaacaca	agacaggccc	86460
aaatgtcatt	ctgtgctctc	tcctcttctg	tccctgtgct	ttctagtccc	ccaaaccctt	86520
ccaggccagc	tttgctcaga	agcctgtgtg	gccttctcca	ccagagtctt	ccttttggta	86580
cccagagcac	cttctgtcct	ctcctctggg	gctctctgaa	gcctgtgctt	tgcactacct	86640
gtgttcatct	gcttattaca	aatctttctc	tcctttatta	aataagtgag	gaagaagtga	86700
accagctgag	ccctaatact	atacaacgag	agacaaaggt	gagttgttgc	tatgggtggc	86760
ccctcaaagc	tttggatttc	atcacagtta	ccagagaaag	ctactactaa	agagtctcaa	86820
atgtcctggc	cagagatatc	cttgaagcaa	gaggctctca	acctgtgggt	ttagattcct	86880
ttgaggtcaa	atatcagaca	tccttcatat	catgcattta	cattacaatt	cataacagta	86940
gtaaaattac	agatatgacg	tagcaatgaa	tagattatgg	ttgggggtca	ccactacatg	87000
aggaactgta	ttaaagggtg	gcagtactgg	aaggctgaga	aacactgttt	tttaacacaa	87060
gtctccaggc	ctcacctgcc	ctccactccc	ttctcaaatg	ctaacagcag	ggctggcgtc	87120
agctttccag	ggaagcttcc	ccaataccag	aatccttaac	aatacttggc	tgatatttat	87180
agtagccaga	agctggaaac	aacctagatg	tccctcaaca	gaggaatgga	tacagaaaat	87240
gtggtacatt	tacacaatgg	agtactactc	agctattaaa	aacaatgact	tcttgaaatt	87300
tgcaggcaaa	tggatggatc	tagaaaatat	catcctgagt	gaggtaactc	aagtcacaaa	87360
agaacagata	tggtatggac	tcactgataa	gtgggtacta	ggcagaaagc	atggaatacc	87420
cacaatacaa	ctcatggacc	acatgaagct	caagaggaag	accaaagagt	ggatgcttca	87480
tcctacttag	aagggagaac	aatataatca	agggaagtag	agggtgggag	ggatttggga	87540
agaagaaagg	agggggaggg	gaaaagaggg	tgcagagtca	ggtattgaag	gagctagagg	87600
agatgtacag	agggtcagga	aattgaacag	aggggatggg	gaactggagg	tagcaaccac	87660
aaagtcccag	atgcgaggaa	agcaagagcc	tcccaggacc	ccatggagat	gacattagct	87720
gaaataaccc	acaaagggga	aggagaacct	gtcaagacca	tatccagagg	ttagactgcc	87780
cccaccccc	gttgaaggat	ggggcaaccc	acccatcttc	aaagttttaa	ctcagaattg	87840
ctcctgtcta	aaggaaatac	agggacaaag	agtggagcag	agactgaagg	aaagtccatc	87900
cagagactgt	cctacctggg	gatccatctc	acacgcagac	accaaaccca	gacactattt	87960
attgctgatg	ccaagaagtg	cttgctgaca	ggagcctgat	acagctccct	cctgagaggc	88020
tctgccagat	cctgaccaat	acagatgaag	aggctggcag	ccaaatatca	gactaagcac	88080
agggacccca	atggagaagt	tagaggaaga	actgaaggag Page	ctgaaggggc 59	cttatctggc	88140

PCT - Sequence listing for submission.txt.TXT atcaatggga ggggaggccc ttggtcctgt aaaggcttga tgccctagtg tagaggaatg 88200 88260 ctagggcagt gaggtgggac tgggtgggtg ggggagcacc cgcatagaag cagggtaagg 88320 tgggatggga tagagggttt gcagagggga aaccaggaaa aaggataaca tttgaaatgt 88380 aaacaaataa aatactcatt taaaaaaaaa aaagacttgg ctggtacttc atacctaagt 88440 tttgaataat gaaaaaatag gctataaata ttcttggaaa taaaaaccag ccttcaattt 88500 tcagcaacat ctaagtgtat gatactttta gttaaggcat aatgataaga taatcatacc 88560 atgtaataat cctgataaga aataatcaaa gcctcctttt gactttctat gcctatcgct tgctcagtgt ggaaaaaagg ggtgggggag cttatcctcc agtaactaac agatctgaca 88620 88680 gctactaatc cgccaaggaa aacgtgcttc ccgatgtcag ggagtatagg gcacagatct 88740 actgggggga cataatgaaa cgagatggag ttacagttca ctttaaaatt taatacaagc 88800 aacaatgaat taagggtgac cacggcctca tgtacgggag gccccagaat gattgcgaca 88860 ctctgggcag ggtacctggc acatgcagaa ggattcgcaa ggagaaggag gtttttctga 88920 agcttctctg ctcgcaatgg gaagatggac ggggtgagca gctctgtttc tggctgtatg 88980 taccagggga agacccaggc cagagttggt gtgagaaaaa ctggaggttg taaagaaacc 89040 tcatccagac ataccagcct ggggacaagc cttctccgga tcttcccgtc actgtctttc 89100 taagggccct gattgcttag ttaatacacg tataaaactt caaagcatta acacagagct 89160 acaccagagc cgtagcaaat gtctgaaggg gccagcaagg gcacacaggc cagagtctgg 89220 aaagaagctg tgtgcacatg cagtaagcac cagctttact ctctgctgag aaacccacgg 89280 ctgctttaaa acccagcttg caaagcattt ctgtgcagaa ggcacaaccc ctatcaatac 89340 tccaaatcct gaaagctgat caatacacag acgctgtaag ctaatcaatg tacaagctct 89400 gcaagctgaa atatctctgt aataaaatga actgtccgta ctttgcaatt ctttctgctt 89460 ctctgtttga aaaggagatg gcttgggtgt caggtgctca agtgcttgct gtacaagaga 89520 acccacgtaa catgtgcctg aaatctcagc acttagaaag tggacacagg gacatctctg aggcttgtca gccagttagt ctacaaactg gtgagctcca cgttcattga gagacatact 89580 89640 caaaagataa gatagagaaa aaagacaccc tgtgtctcct tgaacctcca gagggtgtgc 89700 acaaatatat acatgcatac aaatgcattc tctctctctc tcacacacac acacacac 89760 acacacaca acacacaca accccagagc acagtaggct gaggcaggtt aagtgtcaga 89820 tgaatcacaa tttccctggg agttaagcac cacaggcagg ctgctgtcac tcctgcagga 89880 aaggttccct gggaatacct tggactgcta gaactcagcg ccctagctta gactcgtgtg gtggtttgga tgagaaatgt cacccatggg gtcacacatt tgaacgaacg gccccaggag 89940 90000 ttggtgctac ttggggaggc tgtggaacct ctgggaggtg ctgccttgct ggaggaagtg

	D.C.	T - Sequenc	o listina f	or submissi	on tyt TVT	
caccaggagt g	ggctttggg	ggttcagggc	cttacctcat	ttcctgtctc	atgtttgcag	90060
tttgagatgt g	agctctaac	cttttgtctt	gcctgcttat	tgccatgcct	ctcccaccgt	90120
tacggatgct c	cccattata	agctcctcct	tccctaaggc	attttggtca	tggtgtctca	90180
tcacggcaac a	aaaagtgta	actactacga	tatgcaaccc	ttgatgactg	caccttaaga	90240
atgaagacac c	catttgcca	aattgttagt	atcctgtgac	aactccacag	gacttagagc	90300
aggaaggtgg g	tgaccacct	aggcagcagg	agcaggccca	gggtttcacc	ttcattctgc	90360
gtaacaaacc c	aaggatatt	tgaaaagtac	actaatcggg	gctgggagct	ggctcagccc	90420
ctaagggtaa g	ggcagctgc	tgtcaggtgc	ctacaacgag	tggagttgaa	ccccaggag	90480
ccacttgaca a	aaggagaga	ctgactccca	caagttgtat	tctgacacac	atacacacac	90540
acacacacac a	cacacacac	acacacacac	acacacacaa	acactattaa	gacgcagcac	90600
gccacagttc t	gtgaaagga	gaatggagtg	tttacccttc	cagctgctcc	tctcctaaga	90660
tgagacgaag g	ttcttcagg	aaggacaagg	agaccaaggc	atgagaatgg	cggatcttca	90720
cgtagccggt c	accacctcg	atgagcccca	tgaagttctc	caactccgag	gcaatgttat	90780
ctagagaaag a	ggagtccat	gtcaccgagt	cttcctctgg	tcaggtggcg	cactatactc	90840
agattcacac a	cactggtgt	ggatgcgaag	gggaagcagg	tcttgcgtgg	gggaattgca	90900
gtgagaaggc t	ggcatagca	ccaaccgtcc	ctgtctccac	tctccgcaag	ccacaccggg	90960
acaaggcctc t	gaggcggga	aagcagactt	ctaggaggct	ggctgctgca	gttgccaagc	91020
tgattaacag a	acgtgaaat	cagaaatgcc	aggctgctaa	ttagccccag	ctgacaaatg	91080
gaggcaacat c	tcttagata	tgctcagtga	caggcagtcc	tggctccaca	gtgccatggc	91140
aggactgggc a	aacctgtcc	cagcctggta	agaatggtct	ttgctggacc	tggagttcca	91200
tatttaaaga c	tccatttag	ggctgcagga	aaacactcca	atatcacagc	aatgatgcat	91260
gcaggtagtt g	atctatctt	tccccaccct	ggatcgagac	agggtttcat	gtatgctaga	91320
cttaagatga g	gctgaactc	ctgatcttcc	tgcttcctct	ccctgatccc	tattcctggc	91380
ctgcaggcag t	tttgttttg	ttctctctct	ctctctct	ctctctct	ctctctct	91440
ctctctctaa a	taatttctg	catctctaag	ttttctatcc	tgctcataat	tacttctgta	91500
accagaaagt t	gccaggaaa	agttgctaat	gtaacaggac	cgagagccag	tgaatttctt	91560
ttatcgtgct t	acccacctt	tcacatagca	agtaacataa	actttggttc	atgacaaaat	91620
tctaagacta t	aataaatta	ggtgaatggg	atttttatta	tatctgattc	ttgaaggttg	91680
atttggtgaa a	gtttctcct	atggtttgat	ataaagaaga	ggacaaaagc	cttatactaa	91740
gtctgagcct c	acagagtcc	cctcacttgc	aaaatacata	cagtgctagt	tgtatgtaag	91800
ggctacaggg a	attcaacct	gaaaaaaaga	gtggctgcgg	ctaagcctgt	gttttgttcc	91860
ccaagaattg a	atctataac	ccctgtgtgc		ctctggccgc 61	cctgaactca	91920

PCT - Sequence listing for submission.txt.TXT 91980 ctctgtagac caggctagtc tcgaattcag agatctgcct gcctctgcct cagaagcact aggatgaaag gtgtcttcac tgtgtagacc aggctagcct cgagttcaga gatctgcctg 92040 92100 cctctqcctc agaagcacta ggatgaaagg tgtcttcact gtgtagacca ggctagcctc 92160 gagttcagag atctgcctgc ctctgcctca gaagcactag gatgaaaggt gtcttcactg tgtagaccag gctagcctca agttcagaga tctgcctgcc tctgcctcag aagcactagg 92220 92280 atgaaaggtg tcttcactgt ggagaccagg ctagcctcaa attcagagat ctgcctgcct 92340 ctgcctcaga agcactagga tgaaagttgt ctgtcaccac acccagtaag taattcttct tcatgggctg aatttcccaa tcacattgat ctcccatgac aggaagatat aaaaacagta 92400 92460 aggtttatga attttaaaag gcatgtcttg ggatcaataa actcaaagaa aattaataga 92520 tctggtatga gcaaaactac aatttggtta ttaacataag ggtcagcgtt cttgtgtggg gaacagggcc ctccattgtg gaagggtaga gaatgggcaa taaaaactaa ggacttgggg 92580 92640 gctcgagaga tggctcagca gttaagagca ctgactgctc ttccaaaggt cctgagttca 92700 aatcacagca actacatggt ggctcacaac tatccataat gagatctgat gccctattct ggggtgtctg aagacagcta cagtgcactt acatataata aatcaatcaa tcaatcaatc 92760 92820 aatcaatctt aaagaaacaa acaaacaaac agacaaatgc ccaagcctca aaaactcact 92880 92940 93000 ctattacctc tacagactaa gaatataatt cacttattta acaaatactt aggggcaagc aatccactat aaataaagag gacactttgt ctctgaagta aagaaaaact ttctttccct 93060 93120 aaagatttac cagtaaagat taaaataata gtcttctgcc tatagtattt tacctcatga aactactagt agctcaacct agaagttcta gtggcaggaa ctgaagggca tctatctagg 93180 93240 ggactttctc tgtcagtcca agactagaga agataagatt acagggctct gctgccacca 93300 tgggagatgt tgttcatgaa tacaattctg aagcaacatc ccaggagcgc tgtctacacc 93360 aagtgaagaa agggagtctg caggctcaga ccacagcttg aggtgtggat ggcacatctt 93420 tctggctctg agaggtaaaa caggagatca ctctttaatc tttcctttgc tcagtctcct 93480 caacggaggc aagcaaccca aactctggcc ttacagaagt gtggactctg cagcagctag catgagccag ccatgggtct gagccatcag aggtgtgtgt gtgtgtgtgt gagagagagt 93540 93600 93660 gagagagaga gagaacaggc ctttcctgcg taagatgtga cttaaagaaa gacgagggct 93720 gatcctcttt acaggagtat attctgggct aatggctcaa acatcgactg tctttctatc

trigattitat gitticcgaga aactcacagg ggaggcgtca cacaaagaggc tiacttacat gastecccccccccccccccccccccccccccccccccccc
gcatcgacgc aagtaaacca agaagcggtc cagccactgg tctggtgggg tggagtactt 93960 actgcctctc cggatgttaa taagcagatt gcccttcagg atggtgcatc cttggagcat 94020 ttgagcagaa gtcaccgaat cgatggtttt cgttttcttc tcttcatcgc cgcagacttt 94080 ggggcagggg ccttcgcagg ggatacagta catgctggtg aagataaaga gtggaccaaa 94140 accacaaaag tgagtttatc ttcttgcatt aaaacaaaca aacaaaaag aaaacaaaac
actgcctctc cggatgttaa taagcagatt gcccttcagg atggtgcatc cttggagcat 94020 ttgagcagaa gtcaccgaat cgatggttt cgttttcttc tcttcatcgc cgcagacttt 94080 ggggcagggg ccttcgcagg ggatacagta catgctggtg aagataaaga gtggaccaaa 94140 accacaaaag tgagtttatc ttcttgcatt aaaacaaaca aacaaaaag aaaacaaaac
ttgagcagaa gtcaccgaat cgatggtttt cgtttcttc tcttcatcgc cgcagacttt 94080 ggggcagggg ccttcgcagg ggatacagta catgctggtg aagataaaga gtggaccaaa 94140 accacaaaag tgagtttatc ttcttgcatt aaaacaaaca aacaaaaaag aaaacaaaac
ggggcagggg ccttcgcagg ggatacagta catgctggtg aagataaaga gtggaccaaa 94140 accacaaaag tgagtttatc ttcttgcatt aaaacaaaca aacaaaaaag aaaacaaaac
accacaaag tgagtttatc ttcttgcatt aaaacaaaca aacaaaaag aaaacaaaac
agaaaagtaa ggaggctttt tgtttgttat tacagcagca tttcatgaaa gaaccaggct 94260 gaaacatcca aacaatcaca cagtataatc tcctacccag ggcaagccat ccaagctgca 94320 aacacacaga gggaacacag actgcagaag aggaaagcat gtcgcttgtt tttagacaga 94380 atacacttcc catgcaagaa gcatgtgggt atcataggct tgtggctggg gagccagctg 94440 gtctacctgg gagacacaga ctcacaggca ctctggggct ctgaataaat ggagctgctc 94500 actgatgaga ccctcgcctg cctgcatgcc agaggaggtt gggcaagctg gcagcgctgg 94560
gaaacatcca aacaatcaca cagtataatc tcctacccag ggcaagccat ccaagctgca 94320 aacacacaga gggaacacag actgcagaag aggaaagcat gtcgcttgtt tttagacaga 94380 atacacttcc catgcaagaa gcatgtgggt atcataggct tgtggctggg gagccagctg 94440 gtctacctgg gagacacaga ctcacaggca ctctggggct ctgaataaat ggagctgctc 94500 actgatgaga ccctcgcctg cctgcatgcc agaggaggtt gggcaagctg gcagcgctgg 94560
aacacacaga gggaacacag actgcagaag aggaaagcat gtcgcttgtt tttagacaga 94380 atacacttcc catgcaagaa gcatgtgggt atcataggct tgtggctggg gagccagctg 94440 gtctacctgg gagacacaga ctcacaggca ctctggggct ctgaataaat ggagctgctc 94500 actgatgaga ccctcgcctg cctgcatgcc agaggaggtt gggcaagctg gcagcgctgg 94560
atacacttcc catgcaagaa gcatgtgggt atcataggct tgtggctggg gagccagctg 94440 gtctacctgg gagacacaga ctcacaggca ctctggggct ctgaataaat ggagctgctc 94500 actgatgaga ccctcgcctg cctgcatgcc agaggaggtt gggcaagctg gcagcgctgg 94560
gtctacctgg gagacacaga ctcacaggca ctctggggct ctgaataaat ggagctgctc 94500 actgatgaga ccctcgcctg cctgcatgcc agaggaggtt gggcaagctg gcagcgctgg 94560
actgatgaga ccctcgcctg cctgcatgcc agaggaggtt gggcaagctg gcagcgctgg 94560
gangagan geographett tatenetane aggnatetan tterenange econggaga 94620
ggaagggaca gccgcatctt tgtcactaac aggagtctaa ttcccaaagc ccagggagag 94620
attccaacag gtacctggcg cagtgcaggt ccattattt cttgctaaag cacaagtgaa 94680
tttatatctt gacagtgctt tgcagaaact tgtaaattga tccaaatgtt gttttgctgc 94740
acatacaata aaagccagga acctccgcag ctctctaatg aggtccttgt ccgaatgcta 94800
ccctcagtgc cacacacac ctggagccag aagcagtggc atgcttcctg cttcctgccc 94860
atcatttagg aaacggcaga gaagatgcta agcctggggc tataccttct gagaccttag 94920
cctgtataca gaataagggc cgagaagctg ggtcgatttc tgaatgagaa aaatgaccca 94980
atcttctgga atgggtggga cagtgttata ttcaaattac tgctcttaaa tgagtccgtg 95040
aaacctcacg aaaagaaaga aaatcagggt aaagcaagag ctgcctttac taaagtcttc 95100
catccgttcc caaaatacta tctatagtct gttttgttta aaaaccttaa tagttctctg 95160
ttatcttcct atttcctatt aggagagtgg ggctgaggtt ttcacaggct cccatgggaa 95220
gtggacctag ctagccaaag tgggggacat ctggcttcct ataataccac atgcaacatg 95280
cttgtggtgt tggaacgaga atggccccat agactcatgc atttgaaggc tcagtcccta 95340
gctaacagaa ctgcttggga aggattagga ggcgtctggt gctgagctct cagttatttc 95400
cttcactcca ccatctggga tcctgccctt tgaaatcaca agccaaatta gacatacttc 95460
tgtatacgca gctaaggtca tgacatttta tcacagcact agagaagaaa ctaagacagc 95520
tctcatttct agcctggaga ggggtttcct tctgaacttt ctttgtgctc tgtttgtgtt 95580
tttctcattt aactacatga cgcataaaac ccagctctct ctaaaaacaa acaaacaaac 95640
aaaaacatac ttggaataac tgcagcttca tacacagacc cgtgcagaca gtacagagca 95700 Page 63

PCT - Sequence listing for submission.txt.TXT cccgtgtact ttccacccaa cgctcccaac tgctgctaca tccaacataa cgataacaca 95760 gtgacctggc acgcgtgtca ggttctgtgc atttctccat ctgtctacat agacctgtaa 95820 attccctact gcaatcgagt tcgaggacaa cttcaacaaa gtcctcctgt gtgttgcctg 95880 95940 tttgtagctg ccctctgacc tgccccagac ttcactatcc ctaactcccg gtaactgcca 96000 aggtgtcttc tactgccacc ttgggaaatg ttacagaaag gcagtcatat agcacatggc 96060 ttctgaggct gatgtgcttc ccaatgtaca acacccttga agttaaacct tcctttacct 96120 ctcctggtga tgttctgtgg ggaggcctgc tttcctactt attgtaccag atatctgagt 96180 tgtcctcact tcctggtatt acaaacaaag aggctacaga caagtacatg aaataaacgt 96240 tcagggtcaa catgactatg tttattcttt ccccattttt tttttatcca aataggaaaa 96300 cctggagcca cctcccgctt tgttaaaatg tctaggaatc atttagcaat tgaaaacatg tctataaggg tgtgttctga ttatagctta agtttcctaa aacccactct tgtatagaca 96360 96420 gagcacaaac agtattttca aaatactttc aagcaagtgc taaataggct tcaaaggcca 96480 gcagagggac agctattatt tcttgatagt attttaattt aaaatgggag agactgtgag aacgggcagg gagcagcagc ccagtgcttt aagagcacac tggagggaag gagacccaac 96540 96600 tcctatgaag acacagcatc ctcactgtgt gttacaggac agttgaatgc ctttcagtag 96660 ggagaggaaa taaacttgca ggtcaaatat gatatagtga gtttgatggc cagctctccc 96720 tcttttttt ttttaatttt tattaggtat tttcctcatt tacatttcca atgctatctc 96780 aaaagtcccc catacccacc ccccactcc cctattcacc cactccccct ttttggccct ggcgttcccc tgtactgggg catataaagt ttgcaagtcc aatgggcctc tctttccagt 96840 96900 gatggccgac taggccatct tttgatacat atgcagctag agtcaagagc tccggggtac 96960 tggttagttc ataatgttgt tccacctata gggttgcaga ccccttaagc tccttgggta 97020 ttttctctag ctcctccatt gggggccctg tgatccatcc aacagctgac tctgagcatc 97080 cacttctgtg tttgctaggc ccctggcata gtctcacaag agaccagctc tccctcttac cagccagctc tcccttgctg ctcccagccc cagaaggaag gcattgtctg gactgtgggt 97140 97200 aagcaacttc acactgccag acaaaggtct ttggctcaag atgtagaggg gtacatacac 97260 cccttttcta tgctaaaagt gattatttag atgtaaaggg cctctaaaagg cttatctagt 97320 aacagcttag tcaacagctc aacaaggtag ggtttactag aaggcctgtc tgtccttggc acatgccaaa agcaatggac ccaagagcta aaaccaacct ccccctcct cttcttcatc 97380 97440 ctcctcctcc tcctcttcct cttcttcata aactgatcac cctaagtatt ttgttacagt aaccgagagt tgactaacag agactgccaa cacatgaata aaaaaatggc agacttattt 97500 97560 ttagtagact gtattataca attctgagtc attgtagtcc ctggcttacc aaatcattta

Po aaaatatttg atcttttcct	T - Sequenc	e listing f	or submissi	on.txt.TXT	97620
					97680
tttacttttc atcttagtat					
gcttacagtt agagacatct					97740
tactgaacat cttttataga					97800
aattgttagc aatgctggag					97860
ggaccttcta caaggtgggg	actggatcca	gggcatctca	caagtgtggg	cagtattcag	97920
aacttcctag ttgtattttc	agaggctcag	aaatgtgtat	gtgtgtacag	taccggaggc	97980
agggaatgaa ttacaatgga	accttccccc	aaagtcctct	gctctgttca	ggggaggaaa	98040
caacaacctc agacctctga	ctgtcctgtg	tttccagagt	tataaaatcc	tgtcttcacg	98100
aacatcaccc atgacgagtt	tgtggaagta	cagcttgttc	agtcagaaac	agctctgctt	98160
ccacagtgaa gcctcagagt	ccaggaagga	aaaccagagg	ccacaaagat	ggtggaaggc	98220
ttagagaaag gaggttctgg	cagaaaacat	ggcagatcag	actactagtt	catgcccaga	98280
gcccaggctt gcaatgagac	atgggagacc	tgtttccagg	cctcatgaat	gctggtgagg	98340
gttgtcttca ctctctctca	gactgagagg	caaagctttc	actggcctag	agtagcaagc	98400
tgggaaggag tatctgtagt	taaagtctcc	accgctcatg	cttcagcttt	gcaggtgcac	98460
ggggagcaag gctcgggagc	acctggccag	caagctaatt	cttacgctct	agtgctagca	98520
aggcaccctc aaagtttaga	aataaaaaag	caagctgaaa	cagacccacc	actccaagat	98580
tcgcattaaa acaagctcag	ccatcaccct	ctgacagacc	catctgggtg	aacccctggg	98640
aggtcctaca cttaggggct	atgcagcaga	gaaccctcct	gggcctaggg	acaagagccg	98700
ctgacctctg ggtgctgttg	cggatgaagc	ctgagggaca	ctcctgcatg	cactcatcgt	98760
cgtggataac gaagccatco	gagtcactgc	tctcagcgtt	ggggatgttg	gcgcagaaat	98820
cgcgatccac acagcgccag	ccctcgaacc	tgtaggtgcc	aggcgggcag	gcaggcacac	98880
acacgccttt gtagtagtag	tgtctgcagg	ccacgcaggt	tgtgttgtcg	tccggtgtgt	98940
ggcagctgcc caggcactcc	gggtggcagc	actcgttgtt	ctcggtgcag	gctcgcttcc	99000
cgcacacact tgggcacact	gtgaggacag	agggagagag	ggtggtaagg	atgatgggct	99060
acacagcctc ccctgggtca	tccgctgcca	ccaccagcgt	ggcgtaccgg	agactggcta	99120
gaaaagcaca cctcctctga	aatctgcgta	gatcttaccg	tctgtgaatt	ccacttgggt	99180
aaagacacaa cccaacccaa	gtccattctc	tcctttagac	tcctggtttg	ctatgggatg	99240
agccattaac atttaacacc	catggactct	tcaaaatgca	gtggccacac	ccattaaaag	99300
ggagcccatg gtactggtga					99360
caaggcactg tgctcctcag					99420
gatgcctgaa ccacgcacag		tgtgcacacc	cccttctccc		99480
		Page	65		

.

PCT - Sequence listing for submission.txt.TXT 99540 aaagtgatga agagaggagg cataacaagt acggtggttt gaaggagaaa tgtcctacac 99600 aggttcatgg atgtgaacac caggccggtg gtggtggtct gtttgggaag gttacagagc ctttagcagg gagctggagg aagtcctttg ctgggggtag agtttgtttg gggttttaca 99660 99720 qcctqgccca cttctctatt tcctgtgtgt gggtggaatg cgatcaCttt gtgtttcCtg 99780 cctgacaaga ctaaagccat tccttccccc ctcccccgg ccaccacaag gactctgtcc 99840 cctctaggac tgtacaccaa gataaacctc tatctctggc tccatttttc tgtcaaggta 99900 ttttatcaca gcaacaggaa agttccaaat aaaacaggga actagtcaaa acctctaggt tactgcagca aatgttaacc atacccttta caaaagcact gcgtgactgt ggcctctctc 99960 ttctcaaact ccagaaaaag aaatccaggc tacggaggga ctactctttg ccatgggcac 100020 agaagtaatt atggtctcta aagaggaaca agctacaatc gaagtgccca gtgcttatag 100080 aaggtctttg gtaatgcccg catctgcaac gtctcttcac aacacaacct tcagatcaca 100140 agcaagctgc tggacggtac aggatggtag tacacagggt ttctgtaccc aggggccacc 100200 tgctataagc cttgttaagt taaaggccag gtccagtaat cacagatcta aaatcacacc 100260 ctgaacaggt actctgctat gcacttctgt aaatatgtca tgatgaacac acgcctatga 100320 taacagtaca tgtacccaat tgggggaagg gattgtttgg aaatactaca gaactacata 100440 aatatgtata ttttaactgt gatgtaccaa agagtcaaga ttccatgttt tattaaaaaa 100500 aaaaaaaact actctaaaac caaaactaag ccaaataagc cccagtaacc acaggttaac 100560 ataaagaaca cacaagttca tctgcaccca aaacagccgc tttgtcaacc cttcatgacg 100620 tggtctttcc cgggttcttc ctgtgcacag gtgtatgact acacatacct gaatgttaaa 100680 ccttggacta cggagaaagc actggataga cttggagtgg ataccaccat acagcaatct 100740 cgctacgtct caccgttaca gctgtgcccc agcatcaaac gcgccctcca tgcccacaca 100800 ttactgttcc atgagtacgg ccatctttgt gggcacctct gcacgccact gggatcagtt 100860 ttcagaactg actgcacgga gtcagtatgt gctctggagc cttacaccag tctgtctaca 100920 cagctctaag tcacatccaa gaattcctgt gtcactgccc ttaaaaacag ttaaatcagc 100980 agcatgaccc agtaaggaga ccggagttct cgtgacactg ccaaatcgac ataatcttgc 101040 atttgactct aaagtcatcc ctccacagaa acatcggggc atttcccctc cctggttatc 101100 tcccctgta ggagttttag gtgttctgct gggtatgctc tttggctcca aggcctccta 101160 gcctccactg tggctagagc gtggctgctc tgtgtttgaa gttcgttcat cccatgggct 101220 ataaagcaaa agttttacta gagcttcctg gaacactcct ttaaaaatac agtgtgtgtc 101280 tccttttttc ttgctggctg aaacatagaa atgatgcaca gatattcacg cagccatctc 101340

PCT - Sequence listing for submission.txt.TXT agatggaaca tgaggcaaca tagtgagttc aacttggcct ctcaagatgg ctggtgtctc 101400 tagaccagtg gttctcagcc tgtgggtcgt gatcctcttg aggggtgaca tatcagacac 101460 catgggtatc agatacgtac attatgattc ataatagtac caaagttata attatgaagt 101520 agcaacaaaa taattttatg gttggggtca ccacaacata aggaactgta ttaaatagtc 101580 acagcatgaa gaaggctgaa accactgctc tagactaaca ctgcagctgc tgacctttga 101640 acttcttcag gtgaagagaa accaactttt atctatgcaa ctgaaccatc cacacagaag 101700 acctatcttc agagccacac acaagtgaag acggaaagcc ttctcagctg gtttatgacc 101760 ttcatttatt ataactagct tcaggctgtt tttggacacc cattctagct caggaacaag 101820 cagaagttaa ttatctctgg tcacaccaaa aaacaaacaa acaaacaaac aaaaaacata 101880 atatcagaat tcagacactg tctaccacag caattacctc aaagacagta aaatggagtt 102000 cactgattta acagcctacc atgtttttag cttcacacac taccactgat tctttttca 102060 ctcaaacaca tcaatatatg acacagttga agatgatagt ctgatgactt aattaaacat 102120 atgcactgca cgggttacat caaggtttgg ggtctaaatg agcactgaag ttatttgtgt 102180 taatttttt ttttttaaat ctgtcaatga cagaagtcaa cgatctgttg gcatttacgt 102240 acccacccag aatttactgg ataaacgctg cacctgtgtg ccaggcaact ggacatcctg 102300 aaagaccacg cacagggtgt tcctagtact gtgggttcct ggaagggtct tcagagacag 102420 tgagattggc actgaaaaag gaaggccgat ggggaggggc atcaggacca cccgtcacag 102480 aggtcctcag atgtaaatac aggctgagat gttgctggaa acaaaatgga ccagctcagg 102540 gaggtaccac aggcacaccg attgacggac agcaggaaat caccctgctt taggcaaggg 102600 ttaggttctc acactagaaa ggtcagcatg ctgtatagcg aaggcatgat aaccagagtg 102660 ggcagaaggg cagaagaaca gccagaggag aggaatctgc tactgattac actgtccatc 102720 tatggctcac acagatacat aaagttcaat gtaactcgct aaaggctccc tggtgcagct 102780 gtcccagcca tccgccaaca ccattgctct gtgattcgtt agctcgacgt tatcagcaga 102840 gattatcaat gaggactaga tgccaacttt ggagcccttt acttacttac ataggaaaga 102900 aaatgataca tcacaataga tgatgaagtc aaatagctac atagtagtca aagcccatac 102960 catataaaag cagggggaaa taaccttgta cactgtcttg aatcagttac cccccaaatg 103020 caaatgctac atctttccag gatgagaaag agaaatagaa atccttgaca aaggatttgc 103080 taaatttgag acatgttgag ccctgttcca ggcctgtgat gggaacttct tctcaactaa 103140 gaaccataaa gttaaaaaca ctgtctttac agatagaacg gttcttttaa ggcatatacc 103200 agatccatga gtcccttaac actcagtgat gccaactgtg aacaaatgcg catctgatat 103260 Page 67

PCT - Sequence listing for submission.txt.TXT

tctgtgggtg gaagaggaca aaaaaggggt atgcagagag ggagagagaa gatggaggaa 103320 ggccgacctg cttgctaggg gactgactct agagatctgt gtgtggctac agggaggaaa 103380 ggggtgtggc tctctctcca gcacagagga ttccaggagg aagcaggaga acgcagggct 103440 gggattagac agtcctggag ccagcttcag aagcctgctg taaattttgt ctcatctcga 103500 tgtatataaa tattattagt gttcaggact attaagggat ttcttgaaaa gccccgggca 103560 gtgcgtctcg ccagcagatg gatggctgct ctccatgagt gccaaaactt aaaatttagt 103620 gcagtaacca aatttccaat tacagcacca tggggggaaa ggaggggacc tcccccgcca 103680 ctccagagga ggggcacaca ggcatggtta aagggcagtc caaccttaaa aagaggaaac 103740 ggaagctgtg aactagggca cgaaggaaag caaattgatt ttgcccatga gaccgttcta 103800 ttccttgcca ttaatcagcg aagacaataa aaacaaaacc ttattgaaac agtcagaaaa 103860 gctacaacat gtcctgtgtc agccatcaga aggacaggtc cagggtcagc gtgcatacgg 103920 aggccacacg ttttaaaact cctcttcatt tctttaagag aggacaaaca agcctcgcac 103980 atcagcttgg tccttgcatt tagtaagttc tttctaattt ccctttagcc cgtgattgct 104040 tctgtcagtg aatcctttca tgatcgaaag ctccgagaag cgagcaagct aaagcttccg 104100 agtccaacgt gggaagaaga agtaacgaga ccgcagaaga gaaggatgga agcattagac 104160 aaggcagtgg aaaacactgg tgggaacaca gaggccagtg agggaagggg gaggtaacag 104220 gtgctctggg tgactgtcag agcccatggg gagtaaggtt ccgaacatcg tattcaactg 104280 tagtccaaac tctagaacag agttaaaaag ccatttgcta tcagtccgta agtctctctg 104340 gcaagaatct tcatattatt tgaaacacca cacctaggat ttccatgggc ttccccagtt 104400 cgaaactaag ccaacaagac ctgtcttcag gctctagtgg cctacctcca aaggaacctt 104460 tctcatttca ttaacccaac caagcactct atggaggagt gtgtggataa gccttgaaat 104520 agactcgtgg ctaatcttgg gagcatcctg cccagtactt aaacatgcag aagcctcctc 104580 cgtcctgccc ctcctcttct ttttctttcc tcctcctcct cctgtttctc ctgctcctgc 104640 tcctcctcct gctcctgctc ctcctcctcc tcctgctcct cctcctcctg ctcctcctcc 104700 tcctgctgct cctcctcctg ctgctcctcc tcctcctcct cctcctcaat ttggcccttt 104760 ccaaggcaag aggacatgta atactcaggg ccgtcacatg tatttgttta taaagattta 104820 tacattctac tttatgtgtg tgtgtatgta ccacttttac gtctggtacc cagaggttag 104880 aagaggatgt cagatttctg ggaaactgga gttacagatg attgtgaaac attatgtttg 104940 cgctgggaac ctaacctggg tcccctgtaa gagcaacacg tgtgaataac cactgagcca 105000 cctcccggt ttcctgataa tgtacttgta agactttcca gacacaacca tggtaccagg 105060 agcccaaggg cagagtatca ccaaggctgg ccatgccttc tgttttgtcc tcaggttaac 105120

PCT - Sequence listing for submission.txt.TXT cagcaaggag gatgctcatg atgctcccat gccttgctac ctttcaggaa aggcaaagat 105180 aggccaggga actcaggact cctcatagtt tggatggaag ttccagtttt caaagaatga 105240 gtatctctgt tggcaggaac tgtgcctgac tgaggaggag caggggacca atggcaagaa 105300 caaggagaaa aagcccagct gggggtctgt gctgtgtcca ccttacaagc atcacaatgc 105360 tttcagttta ttagtcttca atgtacccct ccactatctc tcttcacata cctttcccca 105420 ctccaatctc ctcatataaa ggtactacta tgacttcact gtacctctga aacaaaaatt 105480 acatgttgca atttgactat tgtcattatg gtgtggtggt aagactaact aaatctaacc 105540 aaaccaaatc taatctatgt tggaggtaag gcctttggga gagaattagg attgtatggt 105600 gtcactaggg tgggacatca ttgtggtagt agtgccttta tcttatatat agagagagac 105660 agagacagag acagacagag caagcaggca agctcagcaa gtcatgcctt ggccatgcca 105720 taatgcaata ggaatgccct ccttagagac tgacactaca tccttggact tctctgtctc 105780 cagaactatg aaaaagtatt ttctttataa actaaccagc atcaggtaag ataagtatac 105840 ctcataagga atagatggtg agtgttgctt cttggactca gtcagtcact gggttacatc 105900 ctagcaaaat ctgtggctca actcacaaag tcaaactaaa tagtgcttct cccccccgcc 105960 ccccccccc agggggaggg atcgagggtg ggagagtcag agacagagta agaatgagga 106020 gaaaggagaa tgctttctcc aaaaggaaga caaggaccta aaacatactt atggtctttg 106080 caacgtcaaa aggagaactc tactgcctca ctactgagca agcatccaga gtttaaaaca 106140 gtgtctaagc atgtctgcct ggaagactgt agccactgca tagtctgtca cacagcaaag 106200 gcaacttcac gtggcaaaca gtgtcttaaa agcccaggcc gaaaaatcac attggtaaaa 106260 gtattctctg cctaatgcca aaaaccaaac caaaccacac cataccaaac caatccgaac 106320 caaacgaaag caatctcctt ttgtggcggg gcggtaggca gatccagagg agacgtcatt 106380 ttaagccaga atccaaagct atttcagttt ctgtttgaac agaaaggctg ttacagatgg 106440 agaacttcca cagagaaaag cggaccctga gcagaacact cctggagcac agcaagctgg 106500 acagagagag gacaggaccg cgtgcttttt tgacctgttg gcacgctagt catgagagct 106560 cctaactttt ccagcagctg atgctgtaag tcattttctc cttattgact ttcaaaggat 106620 tttcaactgc tctgggttag cttgcttcct aagaagagcc ctgaacagtg cacccgcact 106680 tgggcagttt cttgattctt ggggagtata taaagggcta taagtcacat attgttgctc 106740 ccctttggct ttgccctttg ctttccacac cttgaaagtt gcagggctgc tctgcaggca 106800 gcatggtcca gtcacagacg gccagagtca caggcaggtc cccatcttaa ttccaaatac 106860 atctgcaaaa cccctagaca gtcttccaag cagcccaagg gaagcccact gtttgcaggc 106920 ggtgcccctc aatgcggaga cagcactcat ttggatctgg tttcccaggt gaccttccgg 106980 cagcattcac tecteaggge tecatgaagg tetggeacat geggggeaag getgetetet 107040 Page 69

cccacatgct tgcaacccta ttctaacagc acaggatcat ttgaatcagt gtggaatatg 107100 ctgagactga aagatgtggt ctgccacggc tagggtaact tgctcagact cagatctcaa 107160 aagtaaggac atgcccacac tctgcaggct cattctgagc ctctaatcac tgagatctcc 107220 caggtcagcc tttccacaat agctgtctga gtctctctta tataaatcca atttatacca 107280 caaaggcaaa atacaaggct gcttattaat acggagttaa ctttcagtgt tatttcccat 107340 atgcctgatg acactttagg tgtgttactt atatgcatta tttaatcctc ctgataatca 107400 caaagggtag gcatccttca cttagagatg gacaaactgg agacatcgga gagattaaag 107460 aactcatgca agaggatcag gctgctgtgc cgttgttggg tgtcacactc agagtcccca 107520 acagatgaca gcagcctctc cacacatctt cccatcgtgg tgtggacggc ttctgagcct 107580 ctctgctgtc tgaaaggcat gctgcagggg agttgcttgc atgctagttt tctttttaag 107640 catgcaacca taaggaagaa ataaaccaaa agccctacta cccttttcta ctctcttgag 107700 gtatatccct aaatctagag gacaaaacaa agtaacatac acaccgaaga gccccgcctc 107760 gtgcatacaa gtgatactag agaaataata tgtatcaact cagtgtcctc tattgagttg 107820 tagccaatgg aagtctcatg gacatttttc tgccacaaat ttaaaagact agatttttt 107880 tttttttcat gagacagggt ttctctgtat agccttggtt gttttggaac tcgatccaca 107940 gaccaggctg gccttgaact tagggatcca cctgcctcca ttttcagagt gttatgatta 108000 aagatgtgga ccaccctgcc tggccgccag gctggatctt gttggtatct ctaagagcca 108060 ctgcaaagtt gcacactaac agagaagctt ctcttctgaa agatgcacag tcaacatggc 108120 ttacctgata ggaaatgact gtgacatcag accaaccaga ccaacaagac ccaaaagact 108180 acaggetect cagagteage teggaceaaa taagtegaet gaatgeagta ageatgetta 108240 ggttttcaaa tgccctgaga caatactctg agaggtgatc atagcatcct tccaggaacc 108300 ttgctaggtc acaactcatg cctcactcaa gagctgctcc ttcccaagct tgtaaaccca 108360 ctctaacagc acagaggcat tctctttagc aagccataca gttctgtaag atggaaactt 108420 tgtcgtggaa gaaaatctga gtcagggcca gttgagatgg ctcagtgggt agataaaaca 108480 gctatccttc tgatggcctg ttcgaccccc accccctca ccctggaagt cacatggagg 108540 agggacagaa tcaattccta ccaagtgttt tctgactgcc acatacatgc tgtggtgtag 108600 gtaggagtct cctccccaa taatgtttct aagttgggga acagttcagt gcgtcctcct 108660 tttgggagag cacagtttga aggctcggag aaaataaccg agtagcatcg cacagtccag 108720 gacagaaggt aagccacaga gttcagctgc tgaagcatct gggaacattt cattaatgag 108780 caaaagaaac aatcgcctac tgacaatgcc tgtgggatca ctgaggcctc gggaaccaag 108840 cagtgctggg cagagtactg agaaaacagg aaaacaaaca ctgcaaaagg ggtaacaaag 108900

PCT - Sequence listing for submission.txt.TXT aagcctgcgg agggaagtta taaatagcaa cattataact agaaagctgc gtggaaagag 108960 tgaggaccga ggtgcagctg acccaaagag ggagagcagg aaatttcaat aaatgacaaa 109020 ggccggcaga acagagaggg ctctgcccac ggtgggctaa gagtttcctt tcttcttcct 109080 gcacattttg taatatcagc tttacaaaca cacacacaca cacacacaca cacacactta 109140 aaaaagcaga aagtctggtg gttttcagtg tcttcgtaga gttgtgcaaa tactgccaca 109200 atcgacgtta gaatattttc atcatcccaa agcaaaaagc ccatacatag caaagcttcc 109260 cccagctctg gggaatgact aatcttactc gtctccactt ctccactgaa tcgcctgcca 109320 ggagcatttt acttagtgga atcaaacaaa gggtgttctc ctgtagccac tgtcttccat 109380 ttaaaacaat gctttcaata ttcacccttg gcatggtgtc tactagtcct tctggctttg 109440 ggctgtactg attctcactg tgggaaagcg agcctttcta ttaatgtgga gtgataacat 109500 cgtaggtatt gggagtagaa atgctagaaa cactgacaaa ctcggaaggg gtaaggatgt 109560 caaaggatgg tggatgctga ggtccaggca aggtgctgag aagggtctgt ttgcatccca 109620 gactctgtat ttttggctaa ctctatccac taacttgggc cattctttga tagacagggc 109680 tgtcacagtg ggcataatct gtagaggaat tgtcacctac agtgtggact gtgtctcccc 109740 tctgctcagc aagctacctg tgccacttat ggaaaaccaa gtgcacacac atgagcttga 109800 gctctgtaga aatgcctgac aaatggatgg ctgaagctgc aacactgaag ctctgctaag 109860 atggggagag agaaaaggaa gggcaggaga gagtcaatgg aaaagatggt gacgaagggt 109920 gcagctcaac cttagagtcc ttttaccagc actatattgt tctcacagac tgtcttaatt 109980 cccgtgtact tttaaatagt cgaaaacgcg attttcaacc tattttaaaa cccacataca 110040 aatttgaaaa actgcaggca gattttaaca caggggagaa aacaaacaaa gagagctggc 110100 atgggggtca ggacagacag ggccctcaag ctgatggggc atggtcagca ggggagggca 110160 gcttcatggc tgcttcaagg atggagaatc tctgtctcac aaaagtcaca cactttgtcc 110220 tcaagagttc tgaaaaaagg aaaagaagca agaagtccct gcagagggcc gactcccctg 110280 cagccgttct cagcaggctt gagcacataa agatcacttg tgactgcctg tcacagatgc 110340 tcaaatggac aggatgggga aaaaaaatac ccttcacaca cttaaaaatt actctaagtt 110400 attttaaatc tggaactgtt tgtatattcc ttataagttt atgaaactca cacggtcgct 110460 ccatgactaa ctgaagcgga attgagagag tagtctctat ttataacttc tctgcttgtg 110520 cgtgcgtcca gccctatttc cattctctgg tactgtacgc agagttatgt gaagccgtgt 110580 gggctctgaa atgctactta cttcctaaca aggcaggcct gtgttccata ggggcaaatc 110640 agtgggagac ggggtgaggg gttgcaatga ccaagtgaag gccaggctca gaggggaggt 110700 ctcaagcacc catcattgct caggcagatc ttttgctgtt ggttttgttt gtttgcttta 110760 ttttatttat ttattttaaa gacagagttg ctttgtaaac cctggctgtc ctgggacttc 110820 Page 71

ctctgtagac caggctagcc tcaaattcac agagatccat ttgcctctct gcctaccgag 110880 tgtttatacc acctccaccc ggctagactg cacctctcta aacgggtgtt tgagcctgtt 110940 ttgggacaat cgcacacctg gtgatggctg agagatctgt tctgatggtg tgaattcatc 111000 aatacacaca ttcccaggtc agtgccttaa atctgtgtgc ccgctcatgt cacctcttcc 111060 acttgatttt agtggaattg tgtcaccaaa gggtgcaagg ctttaacagg tcatgcataa 111120 gcctctctcc atacacaaat gtttatgtga agataactga aatgactgac cagagtcacc 111180 catgggacaa ctagtactca gagcagagca catgaggcct aggattaagt tctgttacga 111240 aaagcaagac ggttcatgga gagagtaata aatgtgaaag atacacgcgc acatagacta 111300 cccatggaat tcggatggct acatgtacat ggacacgaat cccctattca cagctgctcc 111360 catcaactgt aagaacagct gctctaaggc tgcctagtca tagtttggaa gaaaaaaatc 111420 aaaaccaact cctggaatct tctctaaaac aatgctctgg tgactgtagt tgtctcgctt 111480 catgctgctc caagaggagg aactccccat gaaaaggagg aaaaggcagt ccacagtcca 111540 cgcttccttt ttgggaaaga tcagaagggg taacaggcac ctcacacctc aatcctgtga 111600 ctaattatga aggtggttta tttttactgc atagcctttt cttttccagt ttatatcacc 111660 tcttaatgtc tccagattca ttcctttcta gaatcttaaa cttcattaca gccatctctt 111720 atgtccatgt atgaaataaa ttaccactaa aaacatccct gagaaacatg tctaaggcaa 111780 ctcagtcact gtatgcacac agtgaagttt acaggaacta ggaggactgt gacatcatta 111840 tagccccgac ctgaacagga tcactgatgt gactgaacct ccaggatgca cagctgcgtt 111900 taaatcagtc gcagttcttg aagaagcacg cactttctaa acacagcacg gatatcaaca 111960 gctggtcaag tgaccttcag cctgctcctc tgaggcccct gcctctctgc tcaccacttc 112020 cttcatcctg ctgctctgct cctgtaactt ggctggaaac atgacttagg tattcccagg 112080 accatcctac tacatacttt tacttaccaa gtagcaatca ttaaaaaaaa aaaaaaagct 112140 cagctagacc tttaaattat ctaggagggt agaaaagcat tgtccctgat aattgtacat 112200 cctgaaaaat actatcacta gcataaatac atggaatatt cataatcagc ctatctcact 112260 gttaaaaagt acctagaaaa gagaccatgc aactgttgag ataccatttc tagaatctct 112320 ctctttttct gagtgtgcat gtgcgcacac acagacttct gttggctttc attgtacttt 112380 gcttgaattt tgtgagcaga gggggtggaa aaaggtacca acttggctaa aacgcatcgc 112440 aagtgttgat gccccatagt gccaatagga atccgagtat tctggaaatg atcacttctc 112500 agtttcaacc aggttttttc gttttgtttt taaaaatggt actgcccacc gttaaaaagt 112560 tcactgaagg cattcaaagt tcgagatgcc acgctctttt ttaaaaccat tttttaaaac 112620 gattaatagt tgagcactta ggtgggcagc ggtggcatgc acctacaatt gcagcacttg 112680

PCT - Sequence listing for submission.txt.TXT ggaggcagag gcaggtggat ctatgtgagc ttgaggccag cctagtctac agatcaagtt 112740 ccaggacaga ggtacataga gaaaaataaa caaacacaaa aataaaacca aaatcaaaac 112800 caccacaaca acaactacaa aattgggtcc agactgggag ccatcctagg cacagtgggt 112860 agaacgcacg ccagctgact gaacagttcg gatgaagatg ccaacagaga gaggcccctt 112920 ctgttttttc caattaatta ggaactgtat gtctgtaaat ttttatttgg tctttgaact 112980 attatctcct gatctcagat aatctggttt actctaaggt gctgtccaaa tcatcaagtg 113040 ttccttgatt gctcagacct atccattatc acccttggat gtaagagact gaagcaatga 113100 gaagcatcct ggacctctga agacgagggt gaacccaggg tatcctttca gacactgtgt 113160 acagggcacc tgcatagtcc tgtgatgtca cctgacccca cggggctggg agcagggaag 113220 gtcatacaga gggagggaga tacaggtagc tttctgcttc cttcccgttt gaacctttag 113280 cccaggtctc ccttcatcac ctccagacat gttctggaat accctctagg ctggttttct 113340 acggttcacg ggaattttca ttggaagctg aaggaattaa caggtagatt aactatctct 113400 ataaacctga accccagtaa gcagacagtg ccagcccgta aagcatagat gagtctggaa 113460 cttggaatgg tgttcaagaa tcactttatc cgtggtataa aaatggaagc attcagaaat 113520 gggaaagggc caaactgcac tccgcctcct acaacgggac ctgtgacccc acagaagttt 113580 ggcaatgtca aggacacgcg aagtttagtt gctacacaaa gggactggtg cctatacagc 113640 gatgcctaag atacaggacc atattttcca aatcaactta aatgtgcagg tgtgtgtgtg 113700 cacatgtagt gcacgtggaa gacaaaaggg caatgcagta tgctttccac tattgctctc 113760 tgcctggtct tgtgaagcag gggctctcac tgaagcagga gcttactgac tggccaagct 113820 ggtaaccagc aggccttttc tgtttcctaa ggccacttag tttttacacg gatgccgggg 113880 atctgaactc agcttctcac acttgcagaa ccatctctcc attcctccaa atcaactttt 113940 aagcagagaa gccttaaatg ctgcgaactc ccaaactatc agagtcttcc tcttctaaga 114000 aagtatcccc aggttttcca aattctggac tcagtctgaa agcgagggtc tgaaaaagcc 114060 agagtcatct cttccactcg ggggtgaggt ggaggtgggg gcaataagca ctgtagcaac 114120 ttccttgaca ttcatgtcaa aggagctgct gcctttcttc agaccccaga gtttcctcat 114180 ccagcaggag gaggcaggga ggtcagggtg cagaagccgt ggagcctgta tcctagtctg 114240 cagcgtatgt caaggtgtgc tttgtcccga tttagagaca gagcgagcgt tgaagtgaaa 114300 aagggttaag aggatggaac aaacagaaca tactttgcag gcaatgacag tgacccaggt 114360 aaaggcagaa gctgtgctca actccctgta atgggagcca gacatgcaac ttctgttatg 114420 caatgctttg tgaaaagggg aaggcttttg gtggtctcca ctctcccacg ggggcctctc 114480 tcccacggcc taggaacgca ggagagagga ggaatggcca ccacaagtct gggctgcatt 114540 cctctgttct gcttctccat ggggcctggg agcgagcacc tttgcaagag aaaactcccc 114600 Page 73

aagagctact ggattctgga gcaaaggcaa ctcaggaact atgaacccag aggacggaca 114660 tcttcacttg gcagatggag aaagtgaagt tcaagcaatc taagcgagga aggttgtagt 114720 gctcgctcac tcactggagg ggggttgggg ggagcttgtt caagcttcca aggagtgaac 114780 acagggattg ggacaccaga aaagcagctt ttcttcatct ttgaaatcac aagccctttg 114840 aacacacgaa ccgcacacct tccttaaaga aatactgggg attttgaaat caatttaagc 114900 acctctaatt tccaaccctg aaacgtttta ctacgtgcat tctctaactg cactcgtctc 114960 tcaccttgta aacaagcaag atcggctgga tgagtgtccc ctaattacgg tttccttggt 115020 gcccgtctat ccgcattggc agcacctgaa ctttctcctg cactgtatct tcctaaattg 115080 acatteteag eccaeactgg caegetggee tggtgeeatt caacageaca aatgacacat 115140 cccaagectg atacttecgt cetectgece tetecacaet gegtgteegt aatectgeee 115200 tccacccact ccccaaccct ttgaaatttc taaaccccag cagaggaagc cctgtagggc 115260 tcttaataag ctcagtcatg ctcgaaatat ccgttttacc cacagggtat tgtaggcagc 115320 aattccgacc agagcacatc tcggcacgag atcatggcct ccaaagccca gcgttcagaa 115380 ctcctaagag caccgctctc atgcagtccc actggaacac ttgggaactt caaacagttt 115440 gggggtggga aaaaaacatc ctctctgata cttccacctt ccacctacac tgtgggttag 115500 gaaactcctt cctgttgctg tggccacgga gggtacatat cgcaactctc ctggctctag 115560 tgtttgtgaa acccacagga actctgccac cacctacaca gaaagtccca tgccagagac 115620 aacgacgcat aaacatttta tgttaagtta gccacatgct aagaaaatat catcttgatc 115680 aggtattttt ctagttctgt ctcacgttca agtctcaagg cccacgtgga ggggagcacg 115740 gaagtacact ggttgcatat cttctgcccc actggaagat gcttgggatt tctgaagaaa 115800 ccacctgtaa atcagtctat cccttaggta atcgagaaag agagtccatg aattgtgttt 115860 cattgatgtg agtcctatag gtgcttcccc ttggacaagg ataggtacca agaacaccat 115920 cctgggctgg ggagatggct cagtaggtaa agtgcctggt gttccacaaa catagggcct 115980 gcgtttggtt tcctagcagc caaataaagc acaggacttg gcaacaggac cctgggatct 116040 ccctggctag acgccctcgt tgaaatagca acctctgggt tcagggagat gttgtagtaa 116100 agataatagt gataatcaag gtggagatgg ctagaggatg atggtcgaca cccaccgtca 116160 actgtggcct tcacctgtgc acatgcacac acaggcagca agtgcacccc atatactaca 116220 cacacaggca gaaagtgcac cccatatact acacatacag gcagaaagcg caccccatat 116280 actacacaca taggcagcaa gtgcacccca tatactacac acacaggcag caagcgcacc 116340 ccatatacta cacacacagg cagcaagcac accccatata ctacacacat aggcagcaag 116400 cgcacccaca tatacatata cacagttttt gaaaaaaaaa aaaaagctca aatcaattta 116460

PCT - Sequence listing for submission.txt.TXT taaaacatta agttttaagt tggcccttaa ctcactaata ttatttgaga ggatcatcag 116520 tgaaattaga aacagaaaga atttaattgg aacctgttga tgtgtttcag gttattcaat 116580 aacaaaaaca atctgccagc ccggtaacat ggtcatttgc tttgaatggg attgcttcat 116640 tctgtggatc cacattccct gaggtgggcc ctgaatggct aggctcatct tctgggaaga 116700 gggacacaat ggcacggggt agcattcctc tgcacattaa tcatgccaaa tatcattaaa 116760 aaacaaaaca aaacaaaaaa ccaaaaccta ccagcccgga agccatggtg gcagcagtta 116820 aagcaacaac ttaagaacag acgaggccca tctgcatgcc gctgtggcca catttgaaaa 116880 ggcccaagga atgtctgtct gtctgtcttc tctgcctaca gttttcaaaa ttggtttcgg 116940 ggagagtgag gttcatgctc tgtgttagaa acatattacc gagcagctgt ctggttacag 117000 aagaacacgg gcttgggaga agttcacagt ccagccctgt cagctgctgt aagtcaaagg 117060 gactctgcct cctcagagtt ccaccggagg cagatgacag acaccacccc gcactgttag 117120 cccatgaaca cacgcagcaa ggcacacagc gacagcaagt gtctcctgca catcggcagt 117180 gctctgtcaa tatcagctgc tgtctccacg taagtctctg gactggattc tcaccttggc 117240 tttgccaact atgtaacagt gcaactaact ggtgcacagg tatagaagag atgaggaggc 117300 tcctaggacc ttccgccacg gcacgcttgg aaaaggaacg tgacgaagag cttctagtta 117360 gttcccttca tgtgctgaag agctgcagat ctggtttcat ggaaggatgg ttagatgaat 117420 aagaaagaaa aagagaacta aagaatgttt tcaattttaa aaattatgtg aaattgtgtg 117480 tgtgtgcgtg tgtgtgtgtg tgtgtgtatg catgtgtgca caggccaagg tgtacacatg 117540 catggtatac cagtgaaagg cagagggtaa gtgtgggagt cactttctct agcctttacc 117660 tgctaagcct cttactggcc cgtaagggca ggaatctgaa gtacttaaac ctcacttctg 117720 atcaaataaa actttataa actttaaaaag accgttttct taatttcagt actcttctca 117780 gacccttctg tcctagagta acctctgtgt gatccacaat agacctgggc tcacccagaa 117840 ctccctgaag gttcaatggt gatggtggtt tggttttgtg cagttctagg aatgtacaga 117900 gacacaggct gaccactgag gtcatgtggg gattaacact tcatcaggta caggagctgt 117960 agctcagggg cagtgtgctt gcctagcatg cttgcagccc tggttccaac ccccaggaac 118020 gctaaaacag agaaaacacg taaataacat gtctgccagg tagcaagcta ttccaagaca 118080 aggaaggaga cttctgtgtt tcgaaaaatc tgttttgaaa cacaaagaga gactgggact 118140 gtggctcagt tagtgtagtg cttatctcta tccgagaagt cctgggttca attcccagca 118200 ccgtttaaat ggggcatggt aatagaggcc tctaatccca gtccctggag atagtggcag 118260 ggggactcca agttcaaagt tactcctggc tatatagtga agaatgcaag gcagactaga 118320 ctgggctaca tgagactctg ttttaaaaag ggaggaagaa tccttccaat acataacttt 118380 Page 75

actcaacttt gcttcagctt acattataaa cgctggtgtt agcatagata cagaagctct 118440 aatattaatt acgggattca gacagaggta gttagagaac tgtataatgg taacacccaa 118560 aactgggttg agtaccccaa atactcaaaa gaaacagaca atgctaacct gggagattag 118620 aaatgattct gcaactagtt ccctgctgca tgtgcagctg gaggccccca caagttggag 118680 gcttggtggg agactgagaa agcatttgct attcgttttc taggtccaag gcatttcttc 118740 caggatccat gggctggact agatggagca agtgcaggct taagaagcac aggtactgtc 118800 cacacactcc tgatcatcaa gatggggagg gtatccagct tgttggctgg tcactagaac 118860 atccagttct ccttccattt gtaccactac tatctaggac tcactgatct tcagtcacag 118920 gaaaaggtca tctatagcca gtggccagag atagcctttt atgcttgctg cacgacacag 118980 tcagggcagt attccaggaa tgcacagaca gcctgctcag cttctctcac ttcccctctc 119040 atagcccaga tcgaggaaga tggattcacc catcctgtca acaaagactg ccagaatctc 119100 ctgtagttgc aggtatacaa ttgtgagttg ctatttaggt tatggaaggg ctgtggcatg 119160 ccaacagata atgtgtggct acatggaggt aggcatggga aggggcaaat acacacaca 119220 acatatgcac acacacaaac ggaacacata catagacacg cacacacaca taaacacaaa 119280 catgcacaaa ggctcacaca cacacataca cactcacaca cataaacaca aacacacag 119340 tgctcacata tacacacaca tgcatgtaca cacactcatg catacacaaa cacacataaa 119400 cacacacata tataccctac ttctgtacat gtgtagtcct gactcaggac cttgggacct 119460 gctgctcatt cagcatatgc cgctttctgt tctccacaga catcctgcag atgtcccagt 119520 gacctgcctg ccgcctgcct tccctgtctt tgaggtggtg acaactcctg ccaccccaac 119580 attttatgtc acagcttcct cttcagctga cttgaaagct ttattttgtt caaggtctac 119640 cgagcaacca agaaagaaga gctagtgttt cacgggtaca gggtggagtg ttctggggat 119700 aggtcagtca tcgtttccct tttagggaga cttggatcgg tgttaatgaa ctactcacag 119760 gaactggcca gaatcagagc ccttgaattt tatgcactgg tccagggagg tcctgagaga 119820 gtggatgcag agtgcactgc ctttttctg cctttgcttg gaatcccaga ggagccagat 119880 tccaggaagg aagtggggca gggaggcagc agggtataac gaacaaacag aaaaacaaaa 119940 caacaacaac aacaacaaca accaccctca aacctggtct ggctcagcgg gtaagagcac 120000 tgactgcttt tctgaaagcc ccaagttcaa atcccagcaa ccacatggtg gcttacaacc 120060 acccataatg agatccgatg ccctcttctg gtgcttctga agtcagctac agtgtactca 120120 gtataataat aaataagtct ctgggccaga gcaagcagag ttcctaaaat tcaattccca 120180 acaaccacat gaaggttcac aaccatcagt aaatccatcc atccatccat ccatccatcc 120240

PCT - Sequence listing for submission.txt.TXT aggcatggcc acagaaacaa tgtgtgccta ttgctattag taacaaggta ccttcttcca 120360 tttgggctgt gtgcggcttc atggtagttt accctgtgct gcctgtgttc atttccacag 120420 ggaccccagg atggcaggaa gacctgcagc cttctcacct tcagaaccag agccaagaac 120480 acagagcaaa tgtcatgaat ggtcagagtc acacagcctg caggaggcaa agctggaatt 120540 ctaagtggct gagccttgag gtctcaaagt ttgtgaccaa tacactgtgg tggacctgcc 120600 ccggttccag agtcactgga aatattctca tagcaagcag gaagatctca gggacagcag 120660 acgtagttct aaatgggcat gtcttgctag aaggcacagc tgatgtgcct tttccagtaa 120720 gcattacaag aagcccattt ccatggttga aaaatgcaaa ggattattct gagccatccc 120780 gatgataaag aggacaacaa tttgccttta aaaaaaaaat ggaagctggg cacagtagca 120840 ctcttctgta gtctcagaac ttaagatggc tgaggaagag gaggacttgg gaagaggagt 120900 tcaaaggctg gcaggggaaa acacatcaag accttgtttc agatccacaa cgtaagcaaa 120960 ccagaaggtg gtggcaaacc tggcggcgac gcttaggaca tctaaatact caattatttc 121020 tacttcaaac agtgtaattc gtacaaactg gtagagcaca gaagcagaag aacattaaac 121080 acaggattta ataatggata tgtgcacaca catatacact gttgaagagc ttgtcgtctg 121140 aaagtttcta tgaattaaat atttgttcat taactactcg agttcacttg caaggcatgc 121200 caggcgccaa gggagagcac agaagtgcac aaggccttcc acacaaagac caggaaagga 121260 gatgtgcaca tagataatga gtaaggcaca gacttatgtc ataaagatgc gtatcaggaa 121320 gccaagagca ctgccagcca agaccatggc gtggaaaggc atgtgtaaag caggtgctcc 121380 cggcagggtc catgtatgca tgagaatctg ctggagtgat ggtgggggtg ggccccttag 121440 atccatgcat ttcaagggaa aactatcaat tatcatcttt atttatttat tttatgcatg 121500 tgagtacact gtcactcttc agacacacta gaagggggca tcagattccc actacaaatg 121560 gctgtgagcc accatgtggt tgctgggaat tgaactcagg acctctggaa gagcagtcag 121620 tgcttttaac cactgagcca tctctccagc ctaattatca tctttactga taactaaaat 121680 gccttaaaag tttaacttag taatactctg tttaaaaggt atataactaa acacagccaa 121740 tctgtttaaa acaacacagt ttcctgagtt gactagaaga tgctagtttt tcattctgtt 121800 tctcctggta caagaagatt tcaaactatc tacaatccct catttaaatt taaaaaccaa 121860 ccaaccaacc aaccaaccaa cctccattgt gagaggtgcc atgccactgg tacctgcctc 121920 tgcctaacag tgtggaaggc tgcacaggca gtggagggaa aaaaccccca aacctctgtc 122040 gtttgttaaa acaaacgagc attttcacat tcactcatac tccctgaccc catagatcct 122100 gtgaattcta aaaaggacca tgcttgatga gaatgttttt taaacattaa cgcctacaag 122160 Page 77

gtggagagcc agaagaaggg agccaagagt ggatggcgac cctcttcctc tcatgcttag 122220 caatttctgg tttcactcct atgcttctga gcaccccaac aggaaggctt cacagctcct 122280 gaaggtctga gctagaccag ggtacacatg aatatgctga ttatgtggtg ctcatgcaag 122340 gagaccccta aaagatgact tccccaccta agtccgaacc gccatgactc tgagataatt 122400 tacccaaagt tacatttctg tttcccaaag tattaacaag agtgtttggc tcttttaaaa 122460 agaagcttag tctttcaggg ctttttttt ttcccttttc ttttttcatt ttcaacaaat 122520 tgcttctatc gtctgagatc tccattacgg aactgtttgt attgagtttt agtgaaggaa 122580 gaaaaaaaaa aaaaaaagaa aacagagcgg ctgggaagat tcaagtgtgc tggagactta 122640 acattaggat cgggcacacc ccaggcttca gggttaagtt aaggagggtg cttgtgtcca 122700 gtgtgagagg tggggatggg gatagaggaa gcttcctcgg aagacttgac cactcccct 122760 cttttgtgaa gcctggaccc ctgtcacagc gagtaccaga gtacagcact cacccatgag 122820 cctcaattcc atgtgagcct attctttact ccacgttagt ctgcctcttt tgcaagcaca 122880 ctctgcaact tttcatttta aactgtgtgg tgtgctaacg agagtcagca gctctctgag 122940 tgacctaggc aagttctttc ttccatgagc tgcctccagc aacagagaaa gggggcaata 123000 ctgttgcagg gtcacggcag ttgggaacac ttttcctata gttccagaat tactggtctc 123060 ctacccaaac ctcagatcat cattaagaca tgctaatgtg tagcgagaca ggttggaagg 123120 atcttttct atataaaata ctgctgactg gggcgtggaa cccctgtcct attgggtgct 123180 gtggccatgc aaaaagaggg tcttccaaaa atttaggatt aagagggcat ggtgggagag 123240 gaacaacaaa ctttggaagc cttctcaatg tactgtagaa ttaaaagcca accaaggcaa 123300 ggaaggtgcc ttccaaccta gaaatccagc caccctctgc aacgagccca ggcctgctgg 123360 agaccacgtg aggtggtagt gggtatgcct ggaacctaac ataccacttc tagtaccgcc 123420 cagctggcac ccaatcagga gcggcacagc attctctaag cccaggttgg cacctgcaat 123480 catcttaagc atacaatggc attgatttcc acttagggtg tagaaataac actcagaaat 123540 tttacctatc tctgctgttt tgctgccaaa tttcaaatac tctccaagaa acgcaaacac 123600 aacagaacac ggaggatgtg acacacaaat tctgcacaat ctcactgcca atacctcgat 123660 gttatactca gtgtattaaa tggaatcaga atcctgagtc ccactgtcaa acttcctcct 123720 cqtctagtcq qtatqtgtga ctgacagctg atgtcactga atgcttgatg tctgaaatgc 123780 ctaggattcc tttttctccc cccatccaaa tataacagct ccatttcata ctccctagaa 123840 tttcatttgt gactggttag cacactatca gtgagggaac acgggggctg caggaagctc 123900 accgtcctta cagatttctg ggagggagct caagagtaag taagtgtgta agccttcata 123960 gctctaccaa acacatgcat aaaacctgat taaacacaga ggaagaacat aaatattctc 124020

PCT - Sequence listing for submission.txt.TXT agtcttctaa ggggcagatg aagtctgggt aagaaggact aaagaaaaag catagagtaa 124080 aattcgctcc cgctttttaa taactcttta agataaggag agttgtttaa tgttttcaaa 124140 ataggcagag agagagaga cgagctagag agagaaagta tgtggtatag tttatgtgtg 124200 tgtgtgtgtg tgtgtagcac tgtgacagag tgtgtgcttg gcatgtgaaa tcccctggtt 124320 tcaatccttc cccttcagaa tgtttccttt ggaacaaacc aatacatctg gtgacgctga 124380 cctttagtgc ccctcctcca ctcaccctgt tttctacagc aaaagtatct acaaaaagga 124440 agccgtgcct caggaagtct tcaccaaagc ttgaagagca tggagagaag aagtaaggtt 124500 ccatcagatg ccttgtgttg aggtaagtcc tccctcccaa tcaacccaca atgaatattc 124560 tctgatgtca gcccctctct ctgagcatcc tgtctctgag accttggaag taagacttct 124620 gtgtctggga ccaaaactac tggggctatt ttggcagctg agccctctgc ctcctctgca 124680 gggaaaaaca gtaggaacat ttcaaataac attcatattt gagatatttt ctggctctgc 124740 gtatttttct acttcatagc acgtgtaatt gtcctccctg ataaaagtgg acctagcact 124800 gctattttaa aagttttgtg ttctacactt taaaaggata cacaaagtcc tagcaggaga 124860 acgtcaatta ccaagtacaa aaacaaaaca aaacaaaaat aggaaatcac catttggcca 124920 atgccacagc aatgggtgtt gaatgaggag gggaagaaat aatgaacagt gtgtttagag 124980 agtcccgaga tctgtctcaa agtacttctt aattagagat aaaaataaag atgttaagtg 125040 acgagaggac cttgcagaga cagcattaac caagtgtcac aattacctaa gcatggggca 125100 tcaggtgccc tggcaggctg acgtactgac tcttcacagc aggaaagagc acaggaggct 125160 gtgtgtgggg ctgcaaggaa tgacctccca tgaagtacct ggatcgagct actgaagtgt 125220 gggaaaagtg tcccggaatc ggagaaatca aggaggacag gaatcagagc tgggtgggca 125280 ccqctcctqq atcaqqaacc acaaatggca caagagaggt caaagggcac tgggaagaag 125340 gggcagatgg tggcagtaca gtgcaggtgc taccttcatg gttcggacag cttcatcggg 125400 gttttgtaag atgctaatta gaagatgtca gacacctccc acccccacgt gtgcaaaact 125460 gaagcagaaa tatttcatat aaaacaaagt gtttttttt taagttccta aggtaaataa 125520 aagcaactta gtgacatatg gaacacaatg tccccgacag tttgacaata aggcaacact 125580 cttccttcgg gaggagagaa atctctactt tgcgtaggga cacatcaagg atatgcttct 125640 ttggaaggtc ttcaggctgg cagagctggt caccaatggg gatggtgtgg gggcgtttac 125700 gttctcacaa ttccccatct atctcatgtt accctccagt gcaacggaag tggagggtac 125760 actgagtgtt catgaagaga aagccgttaa cgagatgctc aacgagaata taaccatctg 125820 tegeaettgt ecegeatgte ceatgeeett tteetagget geaageaege aagtggtaca 125880 cagatacaca cccaggcaaa acatccatac aaactaaaca cacacacaca cacccttttt 125940 Page 79

PCT - Sequence listing for submission.txt.TXT

gggtcctttg gagtccttgt ttatgggagc agacattgtt ctgtcttctg tcacagatag 126000 catcctctga gcttggaaag tttaacatga gattgatccc actctttcca agggggagag 126060 ggagactaat gtgtaagcag acagctccca gtatcacaag ccttagtttc ctcatctatc 126120 actatgtggt ggtagtgagg gcagtaaaaa gaccttgtca agctttgact agaacaacct 126180 gagattette attetgggag tageettaaa tgtaactata tteaetggea aagaagaaca 126240 aactaaggcc ccaggtgaat gtaagaaggc taccattttt acttcggtga tgctgagtgt 126300 taaggcgtgt atagcacaac agaggagtac tccaccgcaa agggatgcac tgtctctttg 126360 qagtcgaggt gccccctcca ggtaatgaga cagaaaggag tggatacagc tggtccaggt 126420 tcttggctgg ctccgagagc tatgctaagt cctctgaatc aatggtatga cacaagtttg 126480 ttctctgttg agctggtgtc ttacttcatc accagtgctc atctctaact cccgagctca 126540 agaaatcctt ctgcaggatt ggagagatgg ctcagcggat aagagcactg actgctctcc 126600 cacaggtcct gagttgaaat ggctcacaaa ccatccctaa tgagatccga tgccctcttc 126660 tggggtgtct gaagacagct acatgtactt acatataata aataaataca tctttgggtt 126720 ggagcgaacg gggctgggga gagagacgaa aaagtgtctg aagatagcta tagtgtactt 126780 atatagaaat aaataaatta aaaaaaaaga aacccttctg cacagccttc tgaatagctg 126840 gggtttcagg cttgagcccc ctttagagac aggcagcaga gacacaaagg cctgcccaac 126900 atgtgtagga ttagatagcc tgggtatggc tgaagggaac aggtactcag gttggcccag 126960 gccaggagcc agactctagt atattatgca aggttgcctc ctaaattata atgcacttca 127020 tttgcagaga gtccaacact agactcatgg tgtctggtag cccagagggt aacaggctgt 127080 gttcttcaca gggaacatct gaggacagag acggaccaag agggctcttg acggtggctg 127140 gtggtaagga ctaggagcgc ttacggcgag ctgcttggga gaagcctttt caggtggtta 127200 tctgagagaa ggcacaggaa gtcatgaaat taggacctga ggacttgtcc aggataggcg 127260 cagtagtgag aactgcatcc ttgtgaagat gggtttgacc tctgctggag gctacaatgc 127320 agctaaatgt gtctttatct taatgactcc agaaacgcca tgctgtgaaa gaagcaggta 127380 ggtagaggga ggtcaggaga gcaaaccaac ctcacgtgaa gggtaactca cagacttgtc 127440 gttcactttc cagaacccaa ccctcaaaag aacatacttc tagggtgtag ctgggaacca 127500 ggaagcagcc agctctgagc tgctgcttgc ttgctctctc acacagtggt aacaagcaat 127560 gctcatctct tttcaaagca ctccaagcaa ataaacacct gcagaggagc tgatggagac 127620 agacttctct tactggggtg agtctattaa acagaaaagg aggcataaaa atgataaacc 127680 cagaccgtca gaacacagtg agtgcaagaa actgtcagca gagagcgaac tgcttccttc 127740 tcacgccgga gggcactgct ggattaagca taatacaagt tatgtatgct cgctgatgtt 127800

PCT - Sequence listing for submission.txt.TXT cctgagcggg taagaaataa ccagtgttca ctagagtaaa aagtgcagcg gttctgaatg 127860 catgctggaa agatctccag caagggacag tgcaggaaaa cgggagcaga agtctcagcc 127920 ctcggtctgt gtatcacctg gtcacgcttt ctcactgagg gatattggtc cccgggcatg 127980 agaggagagg ttcctgctac ctagtgactt tctcaagact gacttaccac taacctgtct 128040 cctatagtgt caggagcttg agtctgaaac agtcttcact aaatttttgg ctgtaactga 128100 aactggacta agtaattaaa aaggtttcaa tatttaagct cacatttaag ttgggaatgg 128160 agggatggtt tgatagtgaa gagcactggc tgctcttcca gaggacccag gctcaattcc 128220 tatcacacat ggaggcttag aagcatcttc ttcaggagaa gacctacagg ggaactaata 128280 tccttttcta gtgcacacat ttaaaactga ggcttagttt aaaccctgtt ttaccagggg 128340 caggggtgtc tgtgcacaag aaagacagac agagtttagt tttagttcta gacttctatt 128400 tgctcaccag gaaaataaca ttggtagact ttaccaaaat ctgcagcaaa aactaaatga 128460 taaatgtact ctcaaaacag ggctcaatat cccacaggtg atcagggtca acttttccag 128520 ggaccctggt gtcagtgggt tttatacttg gaatgagaac acagtaaagc tgggactgcc 128580 aatattcctg ctaggactct ttattttctt tatggcttcc cctagcttat ttagaagaca 128640 ggcttctgtc cctcagggac tggacttctc aagagcagaa cactgctgta ggaaacagtg 128700 tcttccaaga gtcaagggaa ggaggaatgc caccactgag aggagatggc ttgctttcct 128760 ccctcaagaa aagagtgagc aaggctccat ccacggcgtg ttccaacacc ttcccacata 128820 gctggaccca gatgtcatag gggacttgca gaaaggaagt ttcaacatca gctagccttg 128880 gcagatgctc ccaagtcgtt caaaaataaa actcgggcga tgacggtaaa gatgggatga 128940 cggcttaaga tggagcaaga ggctttcccc gtggcgggcc tcagcttagt gctatgcccg 129000 cttgccgtct tgttcaggaa caaaccgggg cccagatgag aaacgcgctc gcgttgacca 129060 tccagaaagg cagagtgtgt gcttctgaag gcagtgttct ccagcctttc taccttccat 129120 taaatggttg agtctgtcct tgtgtggatt gatgttattt ctaaagcaca caattcattt 129180 caagagggga gaggcaggat taagctggaa atagtttttt ttctattgag aaaaaattaa 129240 gtgtaagtgg aaacgttttc atgaaaatgt ttttatatct caacgtttcc tgcgagcact 129300 ctgatcccaa tatatcacag gactgagctg gatgagggag aatgaaggca aaatgaattt 129360 aaataaaatt gaaactgacc ggctaggctt tattctccaa atctcatgaa atagcaaagc 129420 aaaaaaacaa gaagcaactc aacgctttca gctcaaatga gtttcaattt tatttcaaaa 129540 tgttttaaaa tctagtttat tttcatagcc acaaaagctt ttgaatacct atgaatcaaa 129600 agccatttgg cagaaccatg gagcttgtcc tagttgcttt ctctcaaact cttccctggg 129660 cctgttaacc ccttgttagt cagtcacgca cagcaggtca ctctcagtac ccagttctta 129720 Page 81

PCT - Sequence listing for submission.txt.TXT

ggggcactct acagccttag tgtgtatgag caggcagagg ctctaggctg gacggcacat 129780 gaaaatgata tatacagact ttaactacta attactttag acaaagaaca aacagaaaac 129900 aaaaaacaaa aacaaccccc tccccaaacc caaaccaaaa aaaccactaa aaaacaaaac 129960 aaaaaaaccc caatccacat cctttagaga ttattttgtt aatctgcatc ttgatctgtg 130020 ctgctcaggg gccacaggag gccacaggag gcctctgaaa cttgaaacag ttaagattaa 130080 qtaaaaagtg caacgaagag agctcaccac atcctaaatg tttctcaact actcaactcc 130140 cggctaccac acgcagggca gacacagggg atctgtcgag gcacaagact acagagtaac 130200 agtgcaggtc agacagaaga gcaggggtgt ggtctcagtc cagctctcac atagctcatg 130260 ctggcctcaa tttcgccatg tctctgaaga tggccttgaa ctgatcttcc ggctcccttt 130320 gggactgcca ggtgtgtgtt actctacaca ggttacgtaa ttgtcaggcc tttgtgtttg 130380 tgtgcatttc cctaagcaac ttcatgtaca aagctaagtt gggtatgcat tctctcccca 130440 qqcctqqccc cttactctct accgtaaaat gcttcttccc taacaacccg acttgagtgg 130500 ggtccctacg tacagagaaa ggagatattt acagaagaaa gggcaaatga ctgcttttac 130560 agggaaagag catcccaggt caacacacgt accagattgt agagagggca ggtgtctcca 130620 tccccgtgcc tctctatttc ctttccaaca ctcagccctg tgtgagcaga gagtaaggcc 130680 cctctttgat gctgcacccc cctattataa gcacaatgct tgtaaccaaa cagatggttg 130740 gatgtttggg aaatgactga atgaaacaaa agaagaatgg tattctgtta aacaacagcc 130800 aacatccctc tagagcctgg acacacgtct ttatagagcc tggatacaag tctttatatt 130860 ggatagcaac ctctttactt tcaaatgcaa tctcagagca acccagaaga ctgattcagg 130920 tagtatacca cagctcagtc tcttccatgc tcaacaatgg ctccttccaa atggcattag 130980 cgttgtctac atatctgtac agtcagagct aatgtctatc tgttcgtctt taaatggccc 131040 agagetttte aettteeata taetatttea eetaeeette aeetggatat tgtetataea 131100 ataaagagga ggaaaccaag gcttgggcga aactgacttg ccagatcaca tagagttata 131160 ggtatataaa tggaaaagct ctggtaaaga ttacagacta tgctgattct attagctggc 131220 tgtaggacag ctgaatggat ctctttcaag gaagggcatg atttgtaagc atcccacacg 131280 tcagtgctga gtaaggctcc taagtcctgc tggcttgctg ccagccagta gaccccttcc 131340 agggtgaggg aactgggcag agctcagcac aacccagctc acctaactgt ggctgtcaga 131400 atcattggat cctgcccatc atacatccac tctgtggcca tatcccgcag cttcacaagc 131460 ttcatcaggg tcgggcctgt gtctgcaaaa agaccagctt gagaagacca ggaggtgtat 131520 atcaagtacc actcgttcat tcgttcgttc attcactagt cagaacttca aaccaataac 131580

PCT - Sequence listing for submission.txt.TXT cccagaagta aagacaaaaa ctccctctgc cctctggtgg cttgaacttc cctcttggac 131640 ccaattccca caggttaggg tttccagaag ctttcaaaaa aaaatcactg atgaaacact 131700 agetetttag ettagegtat tatacaaaag getgatttee gatttateaa agggttaeca 131760 aataggaagt ataaaaaccg tatgatcctt acagggaatg gtcaaagagc agtgatcaag 131820 tccctgattt acataattct cagccattct tttggcagac ctctacagcc actaacattt 131880 ccatctacgg atgataaaaa gataactctt cccccttcct gggtgcctgt caggtataaa 131940 cttgaagccg ggcacagtta atcctcacaa ctccccaagg aagaggtatt accatgtttg 132000 ctccagatta agaaagaagg gtcaggcctg aattccaggc atcagaattc tactgagagg 132060 gaagagagac agacagacag ctttcactct ggcctagagt gcagagaaaa ctactacttt 132120 ctgtgggaag aaaagtcagt caaccacagg aatcacagaa ggatccatca caagaggacg 132180 ccactgtccc ttaagcagag acaggactga gaagaacaaa ggtactactg ggacagaata 132240 tggagaggtc agcttgagga agtgctctag caaatggcat caaggaggcc atttccccaa 132300 ctggagagag acctcagatc ctcaccacag gagccaggta gcactgtggt acgcacacat 132360 accatgtgtg tactgatgtg gtgggagaca caggcagagg tggcagggtg aaatcaggtc 132420 aagaagaact gagagccagg ccggggccac tgctctgccc tgcttatgaa agccagggga 132480 ttaagtcaag acttcactcg tgattcaaaa agttatctga agacatggcg ggaagtacag 132540 ctaggtctca ccacccctcc ccctccccc cagctctgca tgctcaactg aggacgtgcc 132600 acttggcacg ctggcactct cctacaggaa aacatacttt ggctattcag acgtgacttc 132660 ctggcactcg gaagctgttg gcatggaaaa attaacaggc tgacttggcc agggaggaac 132720 ggttaacaca aatcaccagg aaaagatgag ccctgagcaa gcgggaggtt tgagggaagg 132780 gtcacggaaa aaagaagggg taagacacat ttgtcaggag tcccaggctg gtaccaagcc 132840 cactgcatga caaaggtcat tgagccctca cagccataca cagacatcac ggctttcctt 132900 tcaggcagtg gacaaggagg ctaacggagg tgaacttact tggcctggat gaggcagcta 132960 ataagggaca ggagctggta cacacatcat cacaacattc ttcattacgg tctctttctg 133020 ccttcaaccc cttgcccagt ttgtaacttc ataaggtggg gtaatgatgc caggaacttt 133080 gtagccctga ggcagaactc tgccccagct gtggccttcg taacctcccc ttactacaag 133140 cgacacagcc acctccactc aaatcctgac gacagctcag tatataacgg tagcgtgtta 133200 catactaact tggtcatttt ggggaaagct gcttgtgtgt gtaaaggggg gggggtggtt 133260 tggggcttgg gatcaaacaa atgagtaagt aggaaaaaag accaaccatc cactgagatc 133320 ctaaccaggc tttcataact taagactgga gtcttccaca aactcacaca ggtagccata 133380 gaagctactc ctggaaatcc aatcctggcc agaacatgct agggccaccc acattcctac 133440 ctgcagcaac cttcctttct ccctcagcat caaccctaag atcctccagg gctctgtagc 133500 Page 83

PCT - Sequence listing for submission.txt.TXT

tcagtaactt tgcagggtgt taagtctaga ggagcccaga ggtccgtggc ctcccatgtg 133560 ggggttacaa ttcctacaac cttaaatcct gtaaagcgtg cccacaaggt ccttcagctt 133620 ctcgccagaa cttccaaacc ttgcctttac acttaacaaa gcttcctact aaatatctac 133680 accaaatttc cgtacattag tttttctttc tgcttgtgaa aggggtggtg gtggtggtga 133740 aactagtcaa gatcggatat cctctgcaat accagcttct agaaaagagc gtttttgaat 133800 gggatgccac gtgctgtgtt ttgccatatt gcctgcgctt cctgcttgga gccagagtaa 133860 cagaaacctt gggcactggg aactgttccg tgccacgcaa attccactcc gtatcttcca 133920 ggcaaccctg tcgcaaataa ttcatgtcca ctacgcccct accacacaga atacaactac 133980 attgtgctgc tagaaatggg aaacctgatt cagatcagag aaggtagaaa aacatttagt 134040 tcaacacaat actgccttta tgaaaagggg cgtgcgccgg gtggtggtgt aaatcccaaa 134100 cctgtaagtg gggatagatt tcaagacgaa ttttggaaga aaatgcagaa tcaaaatagc 134160 atccagcttg actcagacca gtaataataa taacaacaac aaaaacccag ccagtccttc 134220 tagagctacg cctgtttagg ctgcgcggtg ctcttaatgg ccagccagcc tgttctcctg 134280 ggaaatggtg ctgctgctac agcgtgactt gctttgcgtg ctgcaataaa aggaaaacaa 134340 gcttgcacga cccaatagct tccttcagtt tgtgcctagc agcggggaga aaattaaaaa 134400 aaaaaaaaaa aaaagcctga aaaggggtcc tgaggcaagg tgaatggagg acaggatcct 134460 agagaacagc actgccctgc aggatttttg taaacagcag cctgtaatgg ccacggttag 134520 agaaagaaaa acagacatgg agggaagcgt gtttacaact gcagcaaggg cgggaggcgg 134580 agggagggat tccccggctc tgcgctcggc cctcttcact ccggtggggc cccggggttg 134640 ggctgagctt cagctcccca ccccaatccg tgctttcttg gggggccccc catcttgttt 134700 atgggaaggt tactcctcct cggctctggt gatcgcgtcc ctaatactcc agctgcatcc 134760 ttgcgggatg ccagcttgac tgacaagtcc tgcagccaat cgctggttgg gcccttagga 134820 aaggtggaat ttcccaacaa actgattggc tgagagagag ggcgggccct ggtgattggc 134880 gtgttattcc gagtagaaag tagtaaacaa ccttggtcca ggggcggtgg ggagggcgcc 134940 cggtgccagc tccctctggc tggcagggcg gggtggggaa gcacccgaga caaaaggaat 135000 cctggctgcc acagcgggga gggcaggaag ggggtggccc caaaagtcag cacctggagg 135060 cgtcgtttgg agccccccc cccccccc cgagccagaa ctgctgactt taagccacac 135120 atcgtttttt tgttttgtgc agaacctcaa aggttttgtt tccatcattt tcacttcttg 135180 tatggctgac gaagtctcca atggaatgat aaccgattta gtcgcttttg tccagaagcc 135240 ccttcctcac cgtcgaataa aaatttaaaa ttgtctttta cgaaagttgc tttaaatcac 135300 acactaaaat tgttgcacta tacaatacgc cattaatggc atgctggtgc accagacaca 135360

PCT - Sequence listing for submission.txt.TXT cagctacatc ttttgatagc aagttttagg agctctgagc ctattgggag cagctgggat 135420 ggagaacata cacaaaaaga aacaacacat gacggcgttg ggaccacttg ataagaaata 135480 aggggttaac ttgccttgcc catagtattt ctggcagtct cacttgaatc tcccattccc 135540 tcactccagc ttcaccatcc ttacaggacc ccaggcggag gaaaccatct gctcttagga 135600 tggggggctc tgctcacccc gcacataaac atgctcacaa gtcgctatcc tgagcaagcc 135660 tcctcaatgt aaaaggggac caggaggcca gccaagccgg ctctctccac ttcaatgctt 135720 gttgaatata cagagaccac gttgtcactt ttcacaatca agatatatcg gtatcacgat 135780 atatcgataa cgggtacttt ataggagata acagtgcaaa ctggccacct ggcattctcc 135840 tttgccattc tagtccctca cctctgctat ctcctatgga gcctgccaca agcaacccca 135900 gtaaatgttc accccaagtc acctttgctg tataaaacat ggatttaggc tttccttggt 135960 ccttgcagcc tggcatcaga ccccaaacca gtagctactt tcattgtagg caccctccct 136020 ctggacactt tgttctgttc ccaggtccct gcccagacca cacacatcat tttactcaac 136080 gttggttttt atgctttcta gactttacct ctgcctgccc aggagaggcc actgttctcc 136140 accepttctcc ctggcccagc taccccactt cttgcagaag actgaaattt gttttcttag 136200 cactaagtct ctgatagggc tttaatgctg tatttagact ccactcctac gttaagaccc 136260 tgaacttcct gaggcctgga atggtattat cttcagattt gggtcttcag tggagatggg 136320 cttctactaa agtgcccgct gcaaacttgc caaatatttc taggattctt ccctagcatc 136380 ctgagtatgc ctacccctga aaatctttcc ttacacacgt gcaattaatg tgttttctct 136440 gctgggtcaa caactctgtt ttctctactt ggcaaatttc cactctgcct aaaatcactt 136500 cctctcttgg catacctttc acaacctccc accaactaca ctgtgtacca agagcagaga 136560 ggtctctttc cgttcttact tctctggcca gaattagcta caaaactaga actagcatgg 136620 tttgttggta aaggaagac ggagaggcaa aatttcagaa gtggtatcac ctgtacatct 136680 gcataaccaa cccattgcca tctgtagggg tgaagcagcg ccatgctccg tttgtggctg 136740 tgatggtctc cccctgcttt ctgtctgaag gcctctgtct ctgaggtgga ttcttactcc 136800 cccctccatc tcaatcagag atctcctct ggctcttatg ctatcaactc tgcacatccc 136860 cgattccttt ccaccatgac actgaactgt catctccttt tctatctgac cagtcactga 136920 cttgctcaca gtttagtctg tccgccatac agccatatcc agtgttctaa gaattgtggg 136980 gttccacage tggggetcag tetetgetta egeceteatg tgacatetgt cateaaceet 137040 ccatctttct aagcctttaa tggtggaaaa gagtaaacct gtagataaag agtggtacca 137100 gatttcacct taagattaca gatacttgtt tgtgaataga atttgttctg gtacaggcaa 137160 atgcacggtt taaaatcaaa actaacaaaa tatacagtat attagctggg aacaaatagc 137220 caactaaagc aatgtaaagc tgggagtctg tattctggct caaagcccat cacggtgagg 137280 Page 85

caaacatgat ggcctgagct tcaggatgct cattaccaca ctgcatcctc agtcaagaag 137340 cagagagaac tggttcccag gacaggggct ggtgctgcct aagtcttggt cttcccgtct 137400 ttaagttaac acggcccttg gcaggcatgc ctgaagcttg acttttcggt gattacagac 137460 cctatcaaac accataaata ataacaccac acatatatta catatataaa aactataaca 137520 cagaacactc aattggcttt cagtaagtgg gctatttttt tttctttgtt gcttaatgta 137580 ttctagatct gtctatgttt acaaacggta tgtcttctct actaacaaat aggatttcaa 137640 attaaaaagc tgaacagcaa aggagacagt gaagagacaa tctgttagct tttcatctga 137700 caagggatta atatactgaa tatataaaga acaaaattta aatgtcaaaa gaacaaataa 137760 tcaaaccaat aaatgggcaa attaatcaaa tgggcagttt tcaaaagaag cacaaaagac 137820 caatacatac atgagaaatg ctcaacaccc ttagccacca gggaaatgca aatgtaaacc 137880 acaccgagat tcaaatctca ccccattcac aatggagcac attaagacaa ccatcaacaa 137940 acactggcaa ggatgcaggg ggaaatgtgc ctgtacacat tgttggtgga aataaaaatg 138000 aagtagttta gatactatgg aagcctatat ggccaaaaat gtgctactac ctcacttcgg 138060 gatgtacaga tgtgatgcta agtcagcaca cgacacatcc acgttactat ccacatcagc 138120 caagcaatgg gaccaggaaa agatgaagga aatgtgatgc acacgcacag ctgtgtcaga 138180 tgtcaaggat aaaaccaaac tatcggcggg aagttaagga gtggacaatc atctgaagtg 138240 acgctggcca gaccaaagcc tatctcatct gtgtattttt tttttttaat gaaaataaaa 138300 gggaggcttt gtacagaggg aggaaatgat acagaaggga aagaagggac aaacagaaga 138360 taatgggtgg taatcaaagc acattttgta tatggatgaa agtattaaaa caagaaaaca 138420 gccatcttat cttcacagac agcattctgc tctatagata accctgagtg gtccccaacc 138480 ttgcctgtgt gtttaaatca ctgttacttc cccagaagcg gatttagttg gtttagaggc 138540 tatcacgtga gccttgaaat gaaacagtag aaacaaagtc ccagatgatt ctaatgagga 138600 ggcaggtttg agagataaca gtaaacctat ttattatccc tctactgata gaacttgtca 138660 tttcagacaa caccatgtaa agtggcctaa tacacctgtc agttcaccgg tgtgctggtg 138720 tgtctgtggg tgatcatcct gggagaatta ccatgtcaaa gggcacaggc actggtacat 138780 acacacaca acacacaca acacaccatc ttccagcccc ctctgccaag tggggctgtt 138900 ttcctataga tctgtcatca gaatctgtga ctgaacattt tagattttca agcatggggg 138960 gctgggagga gctctgaata ctcataaaaa ggactttctg atgtgttcta ctacaacatt 139020 tctggttctt ttgtttgttt gttgttgttt acacctttat tatgaattca cttagagtct 139080 aacaaggatg gacccatgat ccaacatcag ttaagtaaag agcgtatttg ctccaatgat 139140

PCT - Sequence listing for submission.txt.TXT ataaaacgtc atcttattaa acaacgaacg gccacatgtt ctcacatcta cggctggata 139200 tcatattctg tcccttcaca tactggcacc ttgctagcta tttaatcatt aattacttag 139260 gcaccatggg atgctttaat tatctggtaa tttcgttggg cttgtttagc actattacta 139320 ttatcaccat tattattgtt gctattattg acgactgtag agtcagtttg tataattaaa 139380 agaaaccaca tagtatttga agtatattaa ctttataaac acaggaagaa ctgacatctt 139440 gctaacattg gttagactcg cattaaaggt atggttctat catttatttg aatttatatt 139500 tggcagcatt ttgttcagta ctatttttct tattaatttt taagcatttt tctctgggaa 139560 aaacttttct tctatgatgt tgtatagcaa attatttgca cactgtagcg ttatcacatg 139620 actaagtctg gcttatgtta tttccagaag atgcttaatt ccatgccctt agaatctgag 139680 catgtatgca catgtgtgaa cccacagggc aactctgggt gctgttcctc cctccaccct 139740 atttcagaca ggttctcttg ctgggctgta gcacaccaat gaagcaaaca agtggctggc 139800 cacaagcccc aggggtctgt ctacctctgt ttctacataa cggagatttc aagcttgtgc 139860 cactgtgccc gtgattttta agatagattc ttcgacttga agtcagttcc ccacatttgt 139920 gtggcaatca tgccattgat ggagctattt gccaagttcc ctgtgctctt agaactctca 139980 ataaataaac gacaccaaag gtcttttccc ctcactagta tgaagtttat tattttttt 140040 tattggatat tttctttatt tacatttcaa atgttgtccc ctttcctgct ctcccaaaaa 140100 ccctctgtcc catccctcct cccctgctt ctatgagggt gttcccccac ccactcactc 140160 ctgcctggtg gcctggcatt cccctagact ggggtattga gccttcacag gaccaaggtc 140220 ctctcctccc attgatgccc aaccaggtca tcctctgcta tgtgtgactt gagccatggg 140280 tecetecatg tattggtggt ttagteettg ggagetetgg ggggtetggt tgettgatgt 140340 cattgttctt tcaatggggt tgcaaacccc ttcagttcct tcagtctttt ttctaactcc 140400 tccactgggg accctcattg gggaccacat gttcagtcca atggttggct gcgagcatcc 140460 acctctgtat ttgtcaggct ctggcagaaa gtactttttg gcatccacaa tagtgtctgg 140520 gtttggtgat tgtatatggg atggatcccc aggtggggca gtctttggat ggcctttctt 140580 tcagtctctg ctccacactc tgtctccaca tttgtcccgg tgagtacttt gtaccactta 140640 ctaagaagga ccaaagcact catactttgg tcttccttct tcttgagctt catgtggcct 140700 atgaattgta tcttgggtat cctcaacttt tgggctaaaa taccaaggtt ctaatcaact 140760 caattcaaac caataaattt tgacttgaca tttacaacgt aagcaattca gatgtagggc 140820 atagcactag ctggtagagg caagactgga tatggggagc ttctaaccca agagtggaaa 140880 gtgttgggag aacaagactg agggcttggg gcagtgtggg tgaggtggaa agctaactgc 140940 gtgccttagt gcatgcctta ggaaagtatc tcagctaggc tactatagca gctatgcatc 141000 tatctatacc agagaaaccc cacagagctg gacatacaga tgagctcatt catgtctgat 141060 Page 87

gagctcattc atacacgtga tagccatgat gttctgctga acgttttatg agataaaacc 141120 aagtttcctg tttcagagct gtgtgtttaa aggtatgtcc ctttatgaac attaaacaac 141180 cagctgtatg tggtggtgtc aataatccca gaacaagagg gctcatggaa gaagggtctt 141240 aacttcagac tagcttggaa taaatagtgc aaccatgtct caacagacaa acgtaactaa 141300 tggtctcatt ccagacctct taacctatga cctcttgggc tgaggtcata gtcggcatag 141420 ggaagtgcct ggctagtaac aacaacacag tcacacatat ctgtcctcaa ggagctcctc 141480 gagtaaacac ctttgctctg atgatgacaa gcatggccac agtccctgtg cttgcagaat 141540 cttggttaga aagctcccaa caccaccatc ttccactagt tagcctctgc tgttccccga 141600 actgaatccc taagtaccga atgctctcct gttccacaca gaaacctctg agaagcccag 141660 tttacagaat cagagactgg gccattcctc gaagcattgc taaagaactg gcaggagtca 141720 ctcaagttct caggagctat gggaagataa gattctcccc aatgcggttg cactgaaaga 141780 cagggcagta aagaacaatt atgcctaacc ccgatttctc tctgaatcca tttattactt 141840 ctcaatttag gagagtcact cttgtacctg caccctggcc actactcaga aaaacattag 141900 tgtatccaat gatcccttta gtaactactg gagaagcagc tagctgaagc atggggggaat 141960 taaggaagac cttaggagtt caaaacccca aagtacaaac gcactgtcag cacacggaga 142020 gatctgtttt tttatgcatg ccttatgcaa actggcctaa gctaaaaaat gttataaagc 142080 attttgagga gtaaattttg atttcagggt taaaaagaaa tgtacagagt caaagaatct 142140 ttctgttggc tgataacaga gactccttgg aaaaattgac atttctttc gagaagcaaa 142200 aggtggagta gaaatagtgt gagcagcata tgatgtcttg tgacaatgca gagaaggcag 142260 ttgggagctg ccactaatgt cgagttttca ttaggctcat atctccaact tttggttttg 142320 tgaggctgca actcaattgt gtagtaaaaa aaatttgtag tccattaggg tgcttttaat 142380 attcactata tctactatga aataggagct tagatgatga tgatgacaac aacagtaata 142440 gcagcagcta ctttgaaaca ctcacaggca ttgtgagttg gagccctgag cactaaccac 142500 tgtaatttgc tatcaggacc actgggtatg gcattcggaa aacggacata tgcaatcaat 142560 gcttgtgaca tgggagaaca aaaccttgtc aaccaactgc aaacagatgg ctcatggaca 142620 acaaaacctt agagaaaaat gcaggaatat cagcggggca gtgggggagga aaagagaaca 142680 ctttccagac tgtatgcata gaagggcctc aaaggccgcc atgacagatg tgttcctgta 142740 tcggggtcaa caaagaataa agcccatagc acaattctta ggaaaagttg aaatgcctgt 142800 tttgtaaata aaacacaccg acttaaattt ctactactta attttataaa ttccgcttaa 142860 atatgtgtct aaatacactt ttttcccctt gttttgagac atggtctctc tacgtagccc 142920

PCT - Sequence listing for submission.txt.TXT tggctatcct agaactagtt atgtagacca ggctgacccc tgacgcgtgg ggaccctttt 142980 gcttcttcat ctggagtgct gggattaaag acatacatca accagctggg cttaagtgtc 143040 tagattttta acttctttat atttattctt accctcagtg ttattgaaca ttgactgtgc 143100 agacttcaga gtttaccaag tttgaggggc tggccaaatc cttctggact tactgagaaa 143160 qqaacaqacc caggacaccg actggagcta cacggtgggc gccatggcgc caggccgaga 143220 cacgtggatc cttcggcttt gcttctgtgt ctcagctacc tcagaggttt gctgtggaat 143280 cactagtatt ttaaacaatg caaacgcaat tacagttgaa gcacattctc taggagaagg 143340 aaaaggagat tggcatgtag aagcttcatt aaacttttgg ccttttcaaa gctaaacgag 143400 tcttaagaaa agccataaaa agttcccgtt gattgattta aaaacaggct ttttttttt 143460 tttttttttt ttgcaattag cagatctaaa tctacgaaag ggagaaacac gtacggcact 143520 tttagttaac ttcctgcttt ctctgtgtat ttcaaatcgt aacaattaag actctctata 143580 gacacacgta cagatacaca aatacttagc aggacgtaaa cttctatttt ggcttcatga 143640 aaatggtagt tatgtttcca cacacacaat gaattctggc agtttattta caagcagaca 143700 tcccatctgc accagggata ataccctcaa ctatgtgaca tgctacatcc ctcctgaaca 143760 cagtagggct aggaaagcac tgagaggata taaacatgtt cagggcttac aatattcctt 143820 cctaatgctt ctttccccaa cttactgtaa cgatttactg gaaagattgg actaaattac 143880 cgtcttccct ttatcgtccc aatttgtttg catttggtat cctctccttt ctcttggaat 143940 ctcccttgct tttccttttg tcagtaagtt aaattgcttc tcctcccaca tgcataaaag 144000 cattaattta taaaacacat agctgtatgt catatctcat gtaattctat tttacatttt 144060 accactaget agacttatet aacatgaaca aatagatatt atttactgta gecagaatga 144120 qaattatcta atgccactta catagccaga aattgatttt tgattaatgt ttaagcgaaa 144180 agcaaacaaa cccatctgct ctgaaaacaa acaaacaaag aggagcagag cactgagtcc 144240 tcggttcgca ggcattcctg caggcctagt gcctcagcgg ctgcagaatg gggcccttca 144300 ccccagggga aagcggacca ctgacaagaa caggactcca ggcccagact ggagtttctt 144360 ggactgggga ccacaaacaa caacaaatct ctaaaccctc tcaggatcag cagagaattt 144480 catcttgggc qcccactgga agtcaaggaa gttgttaatg gtcatgtttt ccttcttccc 144540 tcttgttcac taggtcagtt aaaagacaaa gaaaaaggct gggcatggtg gtgcatgcct 144600 ttagtcctag cacttagaag gcagaggcag aggttctctt ggagtttgag gccagcctgg 144660 tctacagagt tagttttagg agagctagcc ttcacggtca tctgcccaca cacacacaa 144720 cacacacaca cacacacaca cacacacaca aactgacaaa atgtaaatca agaaagaaac 144780 aaaaacaaag aaaaacagcc ctgtgccatt tattcttata atctctgcgg tttcctcagt 144840 Page 89

atgaagaaca gagtgcagtt tatagttctt gtccactcca tttatattga atatataaat 144900 tattttctaa gatacttata tacataacca aatttgtttt taacaaattt aatgaaaaca 144960 ttcagcatga aactaaatag cagtaagact ctcagatggt gtcttaggtt aaaaacaaga 145020 ggagcactcc aaccttttct ttgacaaggt ctcttgtatc ccaggctaac ccgtatgtag 145080 ccgaagatga cttttaacag ctgacccagt cccttccacc gcttctgttg tactggatcc 145140 cagggcctcc acgcacccca gagaagcact ctaacaactc actgccagct aagctacagc 145200 ccggcctcct ttggagcact ttcaacagcc aaaactgaca caatacatac gcatcaacaa 145260 agtcccatac caagcctgat gatgcaaaca caacttgaag tcttattggc gacgctccgg 145380 atactaccag ttgctaaagg aacagagtgg gactgcgact gcattctgaa acattttcta 145440 caaatactca tcctgcacga agaagtaagg tgcaagtgcc tttatgactc tatttccact 145500 ctagacgctc aggctcaagg cagagcgctt agatcctgct gcacttccat aaaaacaagc 145560 ctgatttatg ctgaaagact ttaatgacaa agttgtcctg atgtgcgtgc gtgcgtgtgt 145620 aggacctaga gaacaagggc ctttgtcttg ctctgccgaa gcacagtgag catttcctga 145800 gccctgattt agcctttaac tgatggttct ggtttgtgct tcaacagaaa taattgcatg 145860 actgaccaaa aaaggaaagg ccaaacaagt cttaaataat gattgttggc gtaccaactg 145920 caccaacctt ttctaattac aactctccat tttattattg tcaggcaaag tgagtacctt 145980 aacttgaaag gctaagctga gggggaaaag cctttttgtc tctactttac aggtttgttt 146040 ttataaacac tccctcagtc cccccaaagc aacaggaggc aggcacaatg accctactga 146100 ggagtacagc ttttacctcc atgggacaat agattgcttt tctgttagcc cctgggagta 146160 aaaccagctt taatatggat gccctttcct tatcaaagac agcagggtaa tacggggagg 146220 gctgccaagc ttgggttgtg cggacttggc aggtatgagg cctacctcgc ttctacacca 146280 cgtcactcaa ggaacagagc agaagaaaca cgttctggaa ctttccagag aggccatcct 146340 tgttcatgta ttctagtcca gagttctact tctctctaca gagatggatg aaacaaaagc 146400 aaaacaacac agagaaaaac cccttctaag ggagctggag ggaggagata atctagagag 146460 aggatgccaa aagtggcttg tttccaagtg acaaaatgca cctttgctgg ggaagctagc 146520 aaggtagaag cccctgttca gaacttttca aggagcagat gaagacaaaa aaatgccacg 146580 caatggggga cggaatcctc tagatgtcga gaaaaagcag cggccatgcc cagggagcag 146640 gactagagag aggcaagcca actcctgctc atggcaaggc ggcttgcctc tccagcgcac 146700

PCT - Sequence listing for submission.txt.TXT tctgcagatg tttccgcacg ttgtttctat agtctgaaga cactccgctg gcagtgtatt 146760 gttggatgct ggcagaatct ctagtcaaga ctagcaactc cacctccttc ctgacatcag 146820 caagggggaa cacaccagga gccaggagac aaggtgtagg tgcaggagac aaacaccgtg 146880 tgtggtccag agctgaactt gctgctggag actgtcctgt caggaaaagt aaaaaacaaa 146940 ccaacacaaa aatccaggag gtgcagaggt agaggcagag gcaggcgggt ccctgtgaat 147000 ttgaggccag tctgctttac acagtgagtt ccaggacagc aggggctgta tagagagacc 147060 ctgcctcaaa aaacaacaca aacaaacaaa aacaaaagaa gggggtgaag aagagaggga 147120 gaaggtgggg cgggggccag gggttgggta tggggaggga aacttaccct ggtggagaca 147180 gtgaaactgt tgtttgccac tgcctctctt aggtagggtc taactgtact cctgactaat 147240 cttcaacttg ctgtattaat caagttgggt tccaactact cttggaacta caggtgcaac 147300 ccaccacacc atcgaagtct tggcgcacag ctctaggggg cataggaaat ggctttcccc 147360 gtgccctgta gaaatggaac tgaaagctca tcatggcggt aagactgttt tttagctcac 147420 acteteacae tgeaaatgae etaatgaeae ageagggeet eeggtaeeat eeteacteee 147480 acgctcccac tccatcctaa tgttagctca cttactcagt ctaccacagg cttaggtgac 147540 atctgaagga atagcatact ataaaaacct gacttggcca ccacagcatg caagctctaa 147600 ggcaggtaga acatactggg tttttgttgt tgttgtttgt ttttgtttgt ttgttttct 147660 tttccagttt ctcccctcaa agatcttcac atcatgagtt atgatactcg ttcattacat 147720 cctcctagaa tggctccagt caagaagaga aggctcaatg acccacccca actgcaaaag 147780 caaaattatc ttagaagaag aagaaaagga atggaccatg taattaaaat tacgaggggc 147840 agtgacttac agaggtaaaa agttaatcac aaggactatc tcaaagccta gtgaaaaatg 147900 gggttttcag aatcagacct gtcaaaggta accacgagat gcaataatgt ggtttggaag 147960 tctgggtgac gggcagcagc aggaacaggt cagggaaggg gggagtaaat tgtttgcaaa 148020 atgaaatgca gaatgaaaga ccatttgagc acacaggcat ctactctaaa acctgcaaat 148080 acctcagcct cagtcctctc acggaggact ggggagtgtg cactcttctt gttgctttag 148140 aggaggtete tgetgeagaa geagggtggg tgggtagagg tteetaetga aagetaettt 148200 gggtatccag caccccgggg ttggtagcaa ggagtccctt taatgaataa atgaagctgg 148260 agctttccag atgtttcatt aatggggcac ccagaaccaa tgctgctgca cccgtgcccc 148320 ctacaactac taccggcatc tgggagcact tagctctaaa gtaggttaga gctggagtgt 148380 aactgtatct atgtgaagac tgagtttgta tatgggaagc tcagcataca gcaaggccct 148440 acgtgctggc tatcactgca atccaggcaa aggcttcctg gaaggctaac gaactataac 148500 ttggctgata atgccgttcg ttcatggctt cgtgagcgct ccagtcccgg tggccttggc 148560 gagagttgga gttgagtgga gactgcaggg acggaaactt ttccagcaag aaagagtccc 148620 Page 91

tcttctccca cggtcactaa ggaggatact tgtatttttc caggatcagc tgagtcgtca 148680 caagaggaga gtggaggggc aggaggagac cgcctcaggc ggcgacaagg gagcccagca 148740 cctccctga agttgcagcc agctgcttct tggctggaaa cttatttaag ttgtcctctg 148800 tcccacttct gaggctctac agggatgctc tgggcactgg gatccatgaa caaacaggga 148860 tgagcggagc gaagggaaca ctctgctcag atgagtctgc ctctcaacgc cctttgccct 148920 cactgtgctg gtggggagtg ggggtggggg aatctgatgg gcaaaagcaa ggggcggaga 148980 tgtgactgtc acgcagaagg tgtgcccagc tcttagaaaa gtgaagaatt caagaaagca 149040 aacacaagca tctctcctgc ttctactccc tagttatccc aatcccaatg aatcttggaa 149100 taattttagt tactgacact ccagatagca tcttcaacag tgaagccaga agcagagcaa 149160 agggatctta gtagcatgtg ttaattttca tgcaggatgc aaaacaggca tttcaacttt 149220 catctttctg gatgcagcta cagtggccac catccctgac caggactctg tcttcatctc 149280 atccttctaa cagttatgca tcaagagtgt atcagtaacc atatcaccat gcaggatgtg 149340 taacttgcct cttctctccc gtttcaggac agccagccac tggaaagtct gaggggcccg 149400 gctaactgaa atctgcagat acgcttagga atccctccca accagccggg ttaacctcca 149460 tatgtttcta atctctaact tgtacccctt gtgcagcctc aaagagatac atgtcacttc 149520 ccgcactgat ctgacaaccc tctctctgag aggctcataa gcaccctttc ccaaggatgg 149580 tcacttacag aaagctgcag gcaaagtaaa tccaagtctg ggcagcatat aataaatggc 149640 tagtggcaga taatgaaaag gctgaaatca caaaatcaaa attctttcca ataaaggtga 149700 atcccacacc tattcattaa cagtccccta ctgtctaaga tgtttgtgta agatcaatga 149760 ataagccatg tcagaagact tgccgactat ggaaactatt tggataatgc tccaaggggc 149820 ccaggccagg tgatgaagac atacccaggg tcattctttc accatgacaa agacatctcc 149940 attgtttcaa agtcactttc agtctcctac aaagttatct ggagaatagt gtgccatgtg 150000 aatgaatgtt caaacttaag caagggtacc accttccttt cagaaacaac cagagaaata 150060 cgaaactgcc tctggggcat cgcaataagt agctggggct ggtaagctcc aagtcttacc 150120 tctgaagtca tcagtaagca tgggacagtg aaggctcaga cataacatct catccaagta 150180 atcaagagta acgccaccca tcacagatgt actggtgcca ccctgggcac agtgacacac 150240 cgagggcact gtataccctt cctgaaggag ttaatcactc aaatgcacaa acctaatgtc 150300 acgagagacc ccagtttaag agcaggttat ggggtcatag gatgagtgct cgttaaaagt 150360 gacaacacca tgcaaaatca gcaagacaag cagacccatc acagcctcga gaagaccaca 150420 cagataagac acatccacac gaccaaagac ttgggaatga aagaaagcac gttagtggga 150480

PCT - Sequence listing for submission.txt.TXT aaactggtgg aatttaaata aagcctgcta agaatattgt gccaatgtta gtgtcttggt 150540 tgtgataact ggattatgat tatgtaagat gttaacatga ggagagctgg gtgacatttc 150600 aggaactctc tgtgccgttt tcaacttttt ctaaggtttt ttttttttt tttaaatgaa 150660 gctgaggagg aagcagagag cctgggaggc tggcttactc tttagtttgc tttgtcactt 150720 tgtccctggt aagtagggtc attatactac agagctggct tgtgttacag ctcttccgat 150780 tttgctccct ccatgtcttc ataacttttg gggaatcgga tgttactcag gtgagacaga 150840 agatgagtga agtcacaatg tcattggaga ttagagagag aaagagagag agacagacag 150900 atagacagag agagacagag aacaaacttc aaatttataa acacattatt cttccacaaa 150960 ggtccacatc acacactccc cccatttgtg caccaccctt gacaacacag ctgtgtggtt 151020 ctctagaaga tgtagttgga accaactttt agcgtcctaa ggaatgatgt catcctttgc 151080 tctataggag ctggttccag aggttttgtg gaacagcttt ctttccagaa agcagccagg 151140 tctgaagctg ctcagacttg ctctagactt cttctgtcta cagagtacgg caacatctcg 151200 tctacaggga ctgcgactgt tccggctctt tgatcatcct gttccctaaa cttaacttcc 151260 ttaagttgca aaacatttac tcttggttgt ttgggtcctt cctcggtata gaaattcata 151320 ttctctgttt ctctctct ctcaacgggg ctgtggactg aacttacgtg aacttcttgt 151380 gtttgcctgg ctttcactga ccctacacct tcagtccttt tcctttgtac ggagaaagaa 151440 atcattaaag agaaaattgt tccttaaaat catccctttc cccatcctcc aagccttctg 151500 tagaaagtgc agtaatgaaa aaaagatgtg tactcacact ttgcttgtat cagctatgga 151560 tgggttccta cctatcttat tgccaaactg aaaaactact tggaaaatgt tccaatgggc 151620 tcggtagaat aatagctcca agtcagaact ggggtgcatg gggtgtgtat agtctccaga 151680 gtggggaagg ctggctactt gtcgggtcct gccctatcag cctaccagtt actacgctgc 151740 tcttccctgg cagctcagtc agtgtgcggc gtggtctctc ctcctggcca tctaaaatgt 151800 ctgcagttat tgtaacacag gatgtgattt ttagatcaat ataaacctgg tgaacagatc 151860 aatcctgtcc ctcataaaca caggcaagta tctgggtatc tagacggtca tgacctctaa 151920 cctctgaacc aaattctcaa cccaaaccat cattagcaga ttgagcccaa gtaaatgcat 151980 gtgtgcagaa gtagaggttg actccttctt aactgctagg tttataccag ctaccttatg 152040 gggtgcccca aataccatct ccaactaaaa ccctttcagt ttaaagggca aagggccctt 152100 aggtaaatgg ttcatttggt gaggcctcct ctctttgagc agtcacatga atccacaatg 152160 gagaaagaga ctctaactcc tgggatttct ggtaacctaa agagttccat gtctttccta 152220 cacaattggt ccccagacgg ctcaagtctt attgaaccga tatatcaatt ctggtggagt 152280 taaaatgctg agtaagagaa aataaagctg aagtaagcgt aaagacaaga gttgttttgt 152340 tttagctgga acatgattct ttgatgagaa aactctcata aacaggaaaa agcacattat 152400 Page 93

PCT - Sequence listing for submission.txt.TXT

tgaagctgaa gtgtttgatg gcttccattt tcctaagagc atttcgcctt agacacaggt 152460 gataactgtc aagagcagcc agagtgattc ctctggatat ttctaccata aatatttctg 152520 aggtcctact gtgtgccagg gattgtagtg atagtgggga tacaaagata ggagttgagg 152580 ctatatacac tcttttcaaa ggcaaagtct cgagctctaa acgcacgact caaacacaaa 152640 accatgatat gcaaaggaaa caaatggttt gtttcttggg gacaggttga acagtaagta 152700 tggtgacagg ttttaattag aagacttcag aagagcaggg ctgggccatg taaatcaaat 152760 cctatatcag ggtctgtact aaactcagaa agactaactc aggcagttac tagagttatc 152820 atgatcctac acagaagttc atataaggac cctaactctg aaagcagaga tttgttgttt 152880 tgttttttt ggctgcctct agctagcaca tttatgaaaa acaggttaag ttactggctc 152940 caaattactc cttaataaaa aaaacaaaca aacaaaacag cataagcttt taagattttc 153000 ttttttaaaa cctagaaaac agtctccctg tcaagagcag gcatgattaa tgacttctgt 153060 gctgtaagct tgggtatccg ccgtgttact agtgtgtgat actcctaaca gcttgtaatt 153120 gccccgagga tacttttgga actgaaaggt gtggggcggg gcctaccttc ttaatatctc 153180 cataattttt tggggggggg ttagactaca tttatcaatg ggacattgaa aatacagaaa 153240 cattgtcaag tcatccacat gaaattatga atgcattatc atctgaagag tcatttccat 153300 aaaacggcag atgacaaata gtcagctctc agtatccatg ggggatgggt tcaagatccc 153360 tccctcagac atgaaaatct gagatgagca agtttcttat tatagatggt aaatctgcat 153420 atgatttaag tttttcttcc tgcatactag aaatcagagc tagatggttt gccatacttg 153480 agagcgcaca aacgctgcgt aaacagtcaa ccgtacggca ctgcttagag cagtggttct 153540 caaccttcct aacgctgctt ctcaaatgct gggaatggaa ggtgtgtggc accatgctca 153600 gctagaatcc cattgtaagt atggcactgg ctggacctac atctgcagaa ctccagggta 153660 ctgaagggct gtactgcatc ctagcagctt cctaggtctt aggaagctac caacctgcaa 153720 actccttctg aggtgaaacc acaacagggc atccaccaaa ctcaaccact ggaacccaat 153780 gaaccagtca agttaacaga acactgagcc accttttgtg ctccatgaca gccctgacag 153840 acaacatagg caagctctat cacactgtat ggctcaacca gccatatttt ccatagaggg 153900 gaaatggagt ttgctgcttt gtttggcaga tgcaaagagt aaagtagagg ggaaccaaat 153960 gagcttagag cacttgggaa ggtaggctga cttcctagtg tgttccactg taccacgcaa 154020 tcccactatt agctccccac ttcctctggt caacaccaga tctgaacgaa acctacagga 154080 aggtttgaag gtacctggcc ttctaaattg tggcttacat aataacatca ggccctctgg 154140 tagaccctgt aggtcaacaa cctaggaagc caattcctat agtccagctt aaataacaac 154200 cttgtgtttc aagggaaaat aggaaggtgt ggaaagcctc cattgacacc ccaactaact 154260

PCT - Sequence listing for submission.txt.TXT tgcctttgct tttctagaga caactatgca cttaagaaag gcaatcgaga tctgcagtta 154320 atttacagtc actgagatga ctcaacatac gttcatacta gtagtatctt cagcttctcc 154380 agttttttt ttttaaagta gaaacaaaat gtccggcctg acattttaaa aacctgacct 154440 atgaggaact tgaaatggtc agttttacaa attttccttc ctttcctctc tttcttctaa 154500 qtcattcact qaattatgta actgactcct agaacacact gcagacccca tatggaataa 154560 qacaqcacaa ctcctgcatg catgatcact gctgggctgc aggaatgtgt taagacacat 154620 gtctgtccct cagtagtgta gacacaatcc ctgtcttgcc ctttagaagt ttataagatc 154680 cctgggcaca cagaacttgt gcatcaagtt aaagactaaa gggccagagt ggggttgaca 154740 agagcaattt cttaagagtc tgaagaaagg gagccagaaa catggagaag gcagtgaaga 154800 ctattttcag cagagagaag agagaatgtt attgagatga aaatgtggat ggcagattcc 154860 agtgcaaggg gtgcagatct catagaaggt gggtcaggga tgtggggttt gaaaatggct 154920 aacagcgagc tccattatgt cacagcagag atgacgcaag gagctgtctc ccagcaggtg 154980 agatgatgct gggtaggcag gaggtagaca caggaagtgg atttaggaac ccatagcaac 155040 catgagggag aatgagggtg gaacttaaat aagggagcat ttacgtagaa aagagttggc 155100 agaattaact ccatgggaaa cttagtggaa ctgaggacaa cgtgtcaact acaaagacca 155160 qaaaqcaqqq ctaqttaqat ggctgagtga ggaagggtgc ttgctctgac ttcaatcttc 155220 aggagtcaca ttccaggctc tatctccaca cgtgtgctat ggcacgtcca cacatagagc 155280 aaccaaataa ataaacataa cattgaaaga taccagaatg catgctgtct ttgaaaaccc 155340 tattcattgt cttaagtata agatgacagg gccatttccc aaaaccatac atcttgtgga 155400 gacacaggtg gggcaaaacc aggtcaagtt cagtggacag caggtaccaa atggacttat 155460 ggctatacct ggtaaggcaa gccatgaaga tgatgagttc tggctccctc gttcttcggg 155520 aacctgaaat ctggagaagg gggagggggg aggaggagga ggaggagaag gggaagaggt 155580 agtggtggtc actggtggac agggaagaac atctaggagg aaagaagcta cagaagttac 155640 tgacggcagg agagggtcct tccaggccat ggaaacactg ggcctcaaag gacaggctgc 155700 tccagtctga tgctgcatca gaaacccaca gtcaatatat tgaaggtgga aatctgaaaa 155760 gcacttattt ttataattaa atacttttat gatagagaaa aaagcaaaca gagaaaaaaa 155820 agcaaaagca tcaggtttca cccaaacaca gcaatggtca gtttgggttc atctgagatg 155880 accaacaaat gccaatatta gagttacagt ttttcaaggc cataattgct acatttaaaa 155940 catcaagagt cacagactgt ccccaaacag tcagagccct catgacctgc ctgtcccagg 156000 atctgagagc tacagtgttc tgcttctatt tagagcatta tgaatgctaa atagaaatgt 156060 tcaaaatatt ttacaaaatg aaaagtagac atcagtccac tgcaggtcta aggctgttct 156120 ccaactttaa aatacattag ttctttttt tcctttcccc tttttctttt ctggagacaa 156180 Page 95

ggtctcaggt agcccaggct ggcctagtat tttatgtgtg actgagaatg accttgagct 156240 cccgattctc ctgcctccat ggaccaacga gtgcagttct ttccccttaa gagtcacata 156300 gttgaaccag gaaggatggc tcatgcctgc aatcccagca ctcaaagggg aaaggcagga 156360 gggctgtctt gagttcgaag ccagcaggga ctataaagtg agctccaaga taggctgcgt 156420 tgcagaatca caacacgtct caaacaaaca acgtagcaga catatctaac ccttaagcat 156480 gacaacgaca catttgtatg atacctgaat aataagaagg gggtgcatca ttataattat 156540 tattatttta cagttgtaaa catgggaaag tgctgagcag ttcaatgagc ttagggctac 156600 agtcactcaa ctgcatgcta gctcagatga ggataatgca gaaacgcctg ccgggaggaa 156660 ggaaggagca aacacttctg ccactccgtg aaatgtcact caaataacaa aacaaaccca 156720 ccgaccgacc tctcaggata aggaagtgta gcggagtggg aacacactct tgactggtgt 156780 gtgaggggcc ctgggattct gtacctagca tcacacacaa aaactgcaaa caaattcttt 156840 aagccatgct tggtaaaaat gactcatttt gaacctagtg tgaattggag attatttttc 156900 aattaatgaa gtttttctag ttggaaggac ttacaacaag ggccactatc ccaaaagccc 156960 ttagggactt gtctaaatga gtaaaaatat tgtgcaatta ggccaacaac tgaaactaag 157020 tgcgtctgag agcttaaaag tagtcgttct caagtactag ttcgaagagc atcaaatcat 157080 ataaaaggtt caaaggaatt taagtgaact gggttgactt ttcaaggcac tgaggtaatt 157140 acaaaataca ctaaatagca aatattaggc ataccctagg tttagacaaa caaaaccacc 157200 ctaaaaccgc cagatcatat agacacacac acacacaca acactcattt tctctctct 157260 tctaacacac acacacaaa aacacattag ggtaaatatg tattagaaaa acctttgcct 157320 aagatttcct ttaaacagtg ggtattattc atttttgttt ttttctttac agaacattaa 157380 tttctttgca aaatgtttgg ggtacagaga ttgcctgaca agagtggcca ccatgaagct 157440 tatgggcacg tgagaggaga ggtgaagaag cctcaatctt tctgagccca tttcatctcc 157500 cctattattc tccacgattt tcaaaagcca ctctactaca aacctgagaa acacaggagg 157560 tcagattcac aaatgaaatc tctttgtctc ccttctgtat gcacccagca tctgctccac 157620 ctagctgacc gttacagggg cagggccagt gttaacatgt caagtgggca gagggctctc 157680 tgcatctcct agtacatttc tggctacagg tgaactaaat gacaccaaag aactgctctc 157740 aaacgtgcat cccaaggtag agctacaaag gttcaatata accccagtat tttgagagat 157800 cttaaaacgc agtcaaagtt aactgtcatg tccatagcaa ggaggaactc actccttagg 157860 atacactggg ctggtcttcc agtgggcatt tcagagagcc ctgctttccc atatcagctc 157920 catcctgtat cctcaccgtt gcttccaaca gggaaccgtc cacatctgac tgcccaatca 157980 gatttcagca ggtggcatgg gggatccaga aagcatttct ctgcaccttt taactctgaa 158040

PCT - Sequence listing for submission.txt.TXT ctgcatgcag aacccgtggt aagaaatgct tctctgatcg ctcctagcac ttttagtggc 158100 catgttaaat cagctaagta agaatgactc ttccatctgt gttaagtggc cttttaaagc 158160 taattcacac tatctccaaa taccctgaat taccaagtct gagggctgcc tagattcctg 158220 cttgtaagca atagaatgac actgaggact ctcggctctc ttctctctc catatcctct 158280 ctggttcact gagaaccaaa catcatctaa acagaacaaa aacatcagaa ctgaaggaat 158340 cgccaaagta tatacacgtg actcccgtct gaatgcattc agatccgacc agtgactcca 158400 agctttctgc atgtttccca tgagctattt gccctgaatc aactcctcac cacaactctc 158460 gaaatgacat ggacctctgc tgttgcactt attattcctt ctctgatggg gagtggttat 158520 gactgaaaat tttcgcgcaa ccagcctcta aacagaaatg cagtttattc tgagtactca 158580 aattcaaatc tcagtaacac agcaattaca ttttaaaata aattctctcc atgttcttgc 158640 ttctaagaag agggtttagt gggatatgaa gagtctaatc ctaggcaacc atatggccag 158700 gccaattata aaccccatat atgttcacac atcaagcagg gcaaactgct ctgggaacaa 158760 cccttaatat tttattgcct gcccaggtgc ctgagcactt ctgagataca cctgtcacag 158820 gaaaatacag cacttccttc catctttacc ccatagttgc cagacaattg ggcagagcta 158880 aagtgggtaa tgttgcagtc aacacttccc taaaacattt atacatgcca ctgataaaca 158940 atagaaattt aaaggagata caaatgtact ccccaaaccc taaatcttcc tcccacggag 159000 gcctaaaaac ttaaaaatct tcatctacct ggcacagaag aaggaataca aattccaagg 159060 ggagcctaga tttatggcct aaatatgtct tcctctagaa tatttaatac acttacgctt 159120 tagtcattcc atacattttg aaaatactct agcacgataa attacagtag ctgcatcttt 159180 catggttgtt cacataaata tcatttggct ttcaggaaac caattacgga gcggtaaatc 159240 attittacat tgcttttcaa aatctttaat ttaacttgca acacggacag ggcacacaca 159300 ggctcccagg aagaacgcag ctcacacatt gtatcattcc ctcttgtccg agtttagcaa 159360 caacccctga gtaagccaca acaatatttt catgttctaa aatatttggg ttatatctat 159420 atatttcaca caggtattag gctcagcaag tatttcctaa cctcctgtag tatttagttt 159480 tcaagacttg gggtaggatt gggaccacat tgatttcagg gtgctgactg tacttctgtc 159540 accatcagct agtttaagga caatgactgt cctggcagac accgcaaaca cagagcctct 159600 atggtgttct tgagaaatca agaccatcat ctcattggaa aggcggtggg aaacaaggtg 159660 cagggccatt gaggccacac aatcaacaac aggatttgct ccagcctcag agacacagag 159720 tggactggca tactatatca atttggaatc ccctcggcta tgacaagttt gtgaaatgaa 159780 agaacaaaac aatacagtac aagatcaagt tttagtagag agaatgcaga caaccacaac 159840 cgagtactta gggagaaaaa aaaaaaaccc agctcttagc tggggagtga cagtcaaggg 159900 gggaaatcac gcgaaggaat ttctttcagg tgcaagaagg catgagagtg ggagacaagg 159960 Page 97

attgagcatc ttggcagaag gatcagaaac ccagtccaag gtctacactt ccgtggagca 160020 gccgcagaca agcttaggta tccggtgggg ataacctaca gttaagacat cacattacag 160080 acactaggga qccattqtga attacagcca acaggtgaga atcataactt agcggggcgg 160140 acacaacaac caagccgtga tctagagcag gaagcggggg atagacagaa agacaggttg 160200 taatggagga gaccaagcag agggctgcat taaggcagag gcttctgtgc tgaccaagtg 160260 actaacacaa agggcccttg cagaagacca gagatgtcag gggggagaat tccttctgag 160320 ggggcctagt tacactagcc acttgatatt caccgggaag gaggcagaga agctaggagg 160380 gtgggcacaa aggcagtggc tctcttctac ctgaggagag ctggcagctc tatcaatacg 160440 gactactcct aaatgggctg cagtcagccc agaaaaaaaa aaaatcactc aatactctca 160500 ggttacctac cctggctccc aaagctggtt atgcaagaaa tattttgttg ttgttttgct 160560 tttaaaagga gacaactgat gcttgtttta gtattgtttg aactacatca ctcacaaatg 160620 agagactgat aaagagattg acaagtctga ctctagaagc aaacacttcc agtctgctct 160680 catctgccct cccccacttc ctccattctc ctcggcctct accccacaat atgcttgaaa 160740 atagtaggta actgagtttg ttttgtacgg tggttgtctt gttatttcaa gcagggtggt 160800 ccagagagaa aaaaacattt tctggaaaga ttttaactac tggatcataa acaagcgtgt 160860 ggtggccacg cagcaatctt tgtaataacg aatccaagac gtcctggttg tgaagcccag 160920 tgaatgtaat gttagctgaa aagcaccgcc tgacacacct ggaaatgtgc cacgggccag 160980 ctttgtagac tgcgacttca aagggaaact ggagtctact tccgcttttc agtgagttag 161040 aaatgatttt ggctgtattg gtagggcaga accagaaaat aagttttgaa tttgtcataa 161100 taatttacaa aaaccaacca acttgttaag atgcatcctc caagcacaac taagctggct 161160 atagaggcta ttctgcattc tgcatctggt cccctggact gctcaggctt agggtgaggg 161220 aagaaacatg acttaagcca ttacccttat tctgtgggca tttgaagtgg ctgccaggca 161280 cgtgacacca actgttccaa ttggttcaca atgacatcac tttattattc aactctgttt 161340 gcatttcagt ctcctcttt ttcgggggac ttgaggccaa tcctggccaa gtcactttag 161400 aagagaaaga agccagtctt aggtagtcat gaagtgccaa gtgtcttttg tgtctcctag 161460 cctagtttgt aagccgggaa ctggtgacat aaagggctct gtcaacagcg cccgggtgtg 161520 ctgcttccct cgcagcggga gagggagatt gggaacccag tagaaggtgg cggttcggcc 161580 ttgggtaggt cccaactgac caagttcaat aaaatccctg agagtttgtt ttcaattggg 161640 taagaaaact ataaaatgga aaccgcatgc gagcttacgc tggaacctca tttaaagcac 161700 ttgtacttcc aaaaaaaaaa aaaaaaatgc agaaaacatt tctaatttag tcaagcgcac 161760 tcttctttcc tcgagcaatt agtcttaatt catgtcacct aactactatt tctgcattaa 161820

PCT - Sequence listing for submission.txt.TXT gcaacgtgac ctctagaacc tacagtaacc ccctttctga tggtgaaagt caattattct 161880 gatttttttc atcttcacac aataagttac cagagaataa actaacttca aaaaagcatt 161940 acagtgtcat gtgtgttcgc ctgttgatat gtgcacacat tcatggcacc tgtgggtctg 162000 tatccagctc ttctactgtg cctgtctctc aattttgcag ctcaacctag agatcaccaa 162060 gtggccagcg agctccatgg atcagcccgt ttctgccctc ctctgtacta agattacacg 162120 caatcatgct gagcctctaa gaacatggcc gctcatggtc tgaactcgga tcctccacct 162180 agcatggcaa acatgttagg aacggggcca tttcctcaac acaaaggaaa aaggcttcct 162240 catgggagag aatgactgga tgggcgagta gacagatgaa aatggacttt tcacaccaac 162300 tggttagaga ccctgttgct tccaggcaca aagcacacca gtttctagta tcagtgggtt 162360 gaaatgcatg tttaagctct ctcatcctta cttggctctt gacaggaaac ttttatggtt 162420 gaactttatt ctgtagaaat gcagtggcat taaccaagca cacaaagcca actcaagcct 162480 aaagtgtgcc catgactcca accctacact cattggttct tgccagaggc aacacgaaac 162540 agtgtataga ctcagaactc tgcccaggcc tgtgaggcag ggccagggct acacaccttg 162600 caaacacaca gcaggctctg cccaaggagc gttcactagg taactatcag ggtggctcaa 162660 gggctgtacg acagacagac cctgcacagg cagggaaagt ttcctggaga cctaccatct 162720 attttcttgt aatctcaact gatgtgttct gccaagtcaa ctattattta tcatttataa 162780 agcagctcct attggcagca tactctgcat atgtttcagc acttcataaa ccctccacgg 162840 tataatcgct tgtggaggag actgggttgc ctggagctgg aatacagacc cacacgcatg 162900 tgagcccgtg taaatgcaca catgaccgtt ccctaccgct ctttcacgag tcatgtcttg 162960 gctctgtagg ccgagtatct ataactaaag ctctctacag gtgtcaaatc aagcaatctt 163020 ggtcctctca gatgtcagct aatggcttag agccccccc ccctaacagt tctatttgca 163080 ttgctaacca aggctatcca ccttagtatc atcatcagtg caagagaagc caaactgcac 163140 acgaagacct ggagagcact tcagagcaca catccgacct cttcctcatc cgagtaccta 163200 gcaagccagt tttccttcct ctcctgtctc cagaagaagt tccaactcca cctcggagca 163260 aagcagcagc tgcagtgact agcagtgact atgcctttgt gactgcgtat cactcatcca 163320 attcacagac tacttagcat cgacttgtat acactttgcc caagaataaa tatttatatt 163380 cccgaaacac agtcgatcga gagcagctga tacagggctg gagatgacag aggcagcaaa 163440 cacaaacaag taagacctcc aggagtgtga gggacagggc tagagacaaa gtaaacagag 163500 gccacaagat cctaggcgct aggtgggggc tactggtacg taagggctgc tggaaagaag 163560 agtcctccgg ggactggctc ccacaaaggc tgcccaatct caagtggtca gctctgggcg 163620 cttgtctaga tggcaatgct gcgtggactc agtgggttat gtatgcgtgt gtacatgcac 163680 atgctaggat aataattaaa aataagaggt catgagtttg ggaggttgga gtttgctcat 163740 Page 99

gggagcaact ggaagtgggg ggcagagaaa gggctgggag tgacacaggt gtagttcttg 163800 tgtatggtct aaagattaaa ttagagttag ggaaaaaaaa accccacagg aattgggaag 163860 agtgattccc aagccactga cacagcacag cactgcttgc ctgtggaggt gctcctgtgc 163920 catcctccct aatctttatg ttgcacatct taagagtggt ctgtttgtgt atcctctcat 163980 gcatgtatct cctcagcgtt ctcatccacg aatgcttaca ggtgacgtta gcatcagcag 164040 ttggagaaca agatacactg gaaagaaaac attgtaccct gatttgcacc gggaagagga 164100 gaaagggaac acgctaagca tataaacatg ttaacggtca agtagagtcc aaatcagatc 164160 ttgccactct tcaaactgaa ggtctgtgat acttaaaagg gggaaaaaac ccattgaaat 164220 gcagaaggca gagaccatca ctcaaagata ctcatcgctt ggaggtcagt ttatatttgg 164280 aacagtgact tgggattggc caaccatcac tcatgccatt aaagtaatat ttcagtttca 164340 actgttttac atgcatttag catgtagacg tattcaattt atagttgtaa acggtctaca 164400 agtgtaagaa gccgataccc aagcttcgaa tttgtaggtg tttaagtcta agtcccaatt 164460 cataccggca ctacaggtca gcaagtgtat ggtttttaac tttaagaggg cgctcaataa 164520 actoggatag aaaatotggg agcaccaggo ottgttgtga agctacttto aaggogatga 164580 tcctcatcgc caggaggaag ttggtttata cccatcatag ttcctttaac acaagcaatg 164640 cagaatggcc ttcacaagtg tctcctctaa aatgactgtt taaattgtgt tgtttcaaaa 164700 agaggacatc cacgagccgc atgtttccat tatcccttgg aactggagct acaggcagtc 164760 aagggcttcc ttacttgggt gctgggacac aactctggcc ctcatggtag aacagcaagc 164820 ccagcaacct ttctagttcc aggattaggt cttaactttc gtggtctctt gatggcacac 164880 agaaattgtc tagaagtcag aggctatgta cgggtggatg atgtacaccc agtcgccctc 164940 caagcaagcc aaatatgaaa gcaatttttt ttttcaaaaa taaaatagca ccacactgct 165000 ctcccaccag gcgtgtagag attttcccca acaaaatatg acacacatca tatctatgat 165060 tgcttctaaa tgaagaagtc tttaaaagtt ttaacttctt aagggccaaa tatcaatgga 165120 tatattccat ataaataaaa attcatcaga tttgtcttca cctattttgg ttgctgtaac 165180 ccaaccaacc aaccaggtag tctctgtctt gttccagtcc cattttcctg gtgcacaaaa 165300 ggactgattt tacttgttag aaggttatcg ggcaattctc tgtgtctctc ttacaagggt 165360 actaagcatt ctcaggaggg ttcaatcttt atggcccaat cactcccctt cgccccaaaa 165420 caatgtcttg atgaccttcc aacacagtca tggcagatta tggtctgtag gctttactgg 165480 tgccaagggc tcctgagaat acaacaccaa agtgatctca tcccaagaag gatgcttcag 165540 acagacagtc ccacatgctt tcctctactc ctggctcatc ccctgtattc catacatcta 165600

PCT - Sequence listing for submission.txt.TXT tatccccgt ccctcttagc tctcctctga gtggcaaaga ggcatctccg acttaacgag 165660 atgcaaggca gagttctagc tccatctgcc atccccacca cacacctccc aaacaaacct 165720 actcccttcc tcctgccagc tcgggaacgg gcaacttcac ttctcgtttc atctaagcca 165780 aatgcctgaa tcatccttta tccctctttg ccccacctgc aagatttcac aagtccctaa 165840 atattcctga atctatctac tcttagttac tgtaactgat gggtgcagtt ctcaacaagg 165900 aactcttctg tcccggcact acctgcatcc agccatgtct agatacattt ttcaattgtg 165960 tctgcgtaga caaggggtag atgtaccacc agtatctagc aggaagatgc atagacaagg 166020 ggtagatgta ccaccagtat ctagcaggaa gaggccaggg atattgatag acattctata 166080 atgcacacag cagctcctat catcaaagac tgtccagctc aaaatgtcaa tggcattgag 166140 aaactgagct ctattccaag ccagtagaat ctctccaaaa aaaccttctc aaaacaactt 166200 cctaactgtt ttccctgatt tttcactctt aattgctctg ctcgatgaaa acaactaaag 166260 ttatcagcag aaatacagag tgtgacccac tagagtgctt tgtcttgtgt catggcctgt 166320 aggcccttgc ctactccact ggcccccggc cagctcctac attctcatcc caccaaattc 166380 ctacgtcaga gccctaagcc ctcaggtgac tctgctagag acagactcta cggtagtaac 166440 tgaaggttaa gtgagcccgt aaggaggaac tgagccttgt aatggttggt gccttcatga 166500 aagacacacg gaagcttgct ctctcatcca ctctgctgtg aagcttgctc tcccatccac 166560 tctgctgtga gaagatggcc atccacacag aaaaaggacc tcactggaat ttgaccttgc 166620 tggaactctg atcttggcct catagttcta ggactttgag aaaagaaacg tcagcagctt 166680 aagccaccca ggctgtggta ctttgttgtg aaagcttgga ctaatacatt caaccttgct 166740 accttgccaa gttccagttc actggccatc agtccactta caccacagcc cttgccctcc 166800 ctcttctgaa ctgccattag ctgaccccta ataaccccta gtcaaaatgc caccctcccc 166860 aggagggact gtgttactcc atccttcctg gattttgagg acagccccat ggttggcatt 166920 aaccaagctg cctaccctct ttgcttactg gtctccttga cccagtgcag aaacctctca 166980 gtcttgcccc ttgtcgaatc aggataagat aatctgtgtg gcttatatct cttaaactca 167040 aaacaaggaa aggtaggggg tctgtgaaca tgctttgccc catgacccag ttccctctgc 167100 cgcttctcca aagagagcta ccatacttat gcctacctta gtttcccaag agcccatcca 167160 gggcaggagg gaatcattac atgtaacatc tagaatgagt acttccttat attctttcac 167220 tttagggagc agcaaaggtt caaggttacg gtaaagtaca ggtatggggg catcaccctg 167280 atatgatgaa gcaccaagga actccccaat gttaactatc tagccacaga gcaggtaagg 167340 gtatgctcca gttagtttta cgaggtcaac tctgaacaga ggaaacaaaa gcaagcagta 167400 aaggactatg aggcacgtgg gtttgtgctg tgtacagccg agcagtcaca gatgcctcac 167460 taaggaggtg gcatggggac taagagtgac tggagttagc catgggaaat tcaggcaaaa 167520 Page 101

agcaaggaag gtctctctga actggtgagg aacagcagtc gtcagtcagt attactgtcc 167580 gttatttctc tacactggcc ccaggcaggt gcttttgaat gactggctgt ttgcaaaggg 167640 aagtccagat acagatggcc gaatgagggg ccacgagcct gtgcaggaca tacagataat 167700 ggaacaggaa ccttgcaatg ctgagaccta ctacgtgacg ggtgcttaac agcttttgag 167760 gttaacggtg ggaatttctg agagaatccc aaagagagct agctggttgc ttgaggccaa 167820 caagggcaag gcttataagt caggggcacc ccagaaagga ggcacacccc agaaaggagg 167880 cagcttctaa gaaagaggaa aagagagaaa gcaggcaagc ctgagaaatc aggcttgggt 167940 ggcctgaaaa ggcagaccat gatgtgtgtg gtgggaaagc agggcaggac tcctcctcct 168000 tctggaggaa tacatgtgct ggcactggga catccagctt caaccccagg agcccaggcc 168060 cagcatgacc tcctaacgca ctgtttagta gacagggtag agcctttaag aatggtggct 168120 cgatggaggc cctgtcccat cctccaagat gtctaaaggg ggtgggactg gctaagtccc 168180 tccttctctt cctcaccccc tccacatcca acctcctcca aaaacatcaa atattttctt 168240 ccataaataa ttgcaacagg atgccattgc tttcctcaaa gaaacaatgg cctgattgtg 168300 ccctgtccga cacgggccca gccccagcac acacaaaggg tggctttcag aagccctgct 168360 gtagagaatg ggggtacacc tcctttcttc tcttctgtac caagtccact gccctccacc 168420 aggaaaggac atcaggaagg ggctgctacc acaggaataa ttcccatcag aggacagcta 168480 tcattcacct gcctttagat tgccctttgg ccacctctag aaagttcttc gttctggtga 168540 acagaagagc acctattggc tctaaaatcc aacacacac cacatacagt tttaggctgg 168600 agatatctat aattttttt tctaattttc aaacttattt gaaattgtca ttaattaact 168660 tttaaaatat ttgaaatcct agcattcagg aggcagaggc tggacaattg ccccacattt 168720 gaggccagtc tggtatacac tgcaagttta ggtcagccag gcctatgtag tgagctcctg 168780 tctcaaaaaa aaaatacata agtaaataaa aattataaat agataataaa atagtcccat 168840 tttacgtgta catcttcagt ttcacaattt gagataaagt gaatacagat attttcattc 168900 agtatctgtg gtagtgccaa cactggatgc tcacacaggc tcatgcatgt gaacatctgg 168960 tccccgtggc tggcacagtt tgggaaggtt atggaacctt taggaggtgg agtcttgctg 169020 gaagaagtga gctaagccac tgggtgcaga ctcggaggct gatagctggg ccccacttcc 169080 tgtccgctct cctgtttctt caccccactc cacttcctaa gtacaggaag cgcttcatct 169140 agcttcctgc ccctgccacc acagcatccc agattaattc catggaaact ctaagtcaaa 169200 ataagccctt tattacttaa gttgtttttg taacactaat caagtgtgtt tcttggttaa 169260 aaaggacagg ctggactaaa ggattcaatt tcagcactta aggggctgga gagatgagag 169320 agcctgctgc tggggctgtg ggctgggata agttgaggcc cgagtttagt tctcagcacc 169380

PCT - Sequence listing for submission.txt.TXT catgtttggt tcccaacatt ccatgttcac cccaggcctc caagggcctc cacacacata 169440 gatataccca ccctgagata ttcgcatgca tataaataaa cataaaataa atatttaaag 169500 aacccatcac tttgcagcca tggcttgaca aacaggctct ttggtgtctt cctcacatag 169560 gtgcaagagg aactcaggca ggggtgttga gtttttggat tttgcactta tttatttatt 169620 tattggtggt actctctgtt tattggggga gttgtgggtgg gttgccattt gtaacatttc 169680 cattaaagat gttaaaaggc tgccttccca ttttcaaaga ctcagactga tcactctccc 169740 agccagaggc ttctgtcagc tactaaaggg ttcctttccc ttctatttta tggcctttct 169800 cccatccact tctgctttgt tcttttaatt aaaatgaaat gtaggccctc catggctgag 169860 atgctaataa ggcccctgaa agtcatctgt gagcacatcc actcttgttt aaagagccat 169920 gtaaacagac cacagacggc tacagagagc aacgctgcac agggcaagga aaagggaatc 169980 tggctgcacc gtacagtgct acgttgaagt gatttatcac ttatgccagg aggaggaact 170040 gaaacacaaa cgcaatttca agtttaagca tggcgtctcc acaggatctt ccatagcaag 170100 cactctgcac tcgggggctc cctgtcagga aactcctgga caacggttgg tttgccgtct 170160 gatccacttc agttacctca ccaaacattc aagaggtact ttctgatgtg tgtgggcttt 170220 agcgctaggt tgatacaaaa cagtacctgg atctgtactg gaagtcaact atatttgctg 170280 ccaaatccat tgtaactggc tctgcatgga gccatccgtg tgagagaggc tgatgtgtct 170340 gccaccactc tgcagacact ggaaacagcg caggaccaat ctgtatccat cgttcctacc 170400 tgtttctcag tgggtaacat tctcaaagca ttttcagatg aagaatttag tcagacagac 170460 agacagatgg agacacggat cactggaaga ctgctgtatg gggccacatg gggaaacact 170520 gggttagtca ggaagacacg gcggtttcta cagggaaagt ctgggtgtcc ctttggagtt 170580 cttgtgtgag aaagttgtcc ccaaggtatc agtgctggga gatacaagtt ttttgggttt 170640 ttttgtttgt ttgtttgctt gtttgtttgt ttgtttcaag acagggtttc tctgtgtagc 170700 tctggctgtc ctggaactca ctttgtagac caggctggcc tcgaactcag aaatccgcct 170760 gtctctgcct cctgagtgct gggattaaag gcgtgcgcca ccacgcccag gtgggagata 170820 caagttttaa gaggtgggcc tggtgatagg ttcttaggcc actgggtacc ctgtcctcag 170880 agattaaggt aattctcaca agagggctag agaaacgggc caagtgtgac ctctctccac 170940 atctgcttct tatgtttact tgctctcagg ttcctgtcac tgactcgagc aagagcaacc 171000 cttaccatag ctgcactatg atgtttggac ttcaaaacca aactctggac attaactaag 171060 atttctcttt ttaaaatcag taatacactg ttgactaaca atgaatgaat gaagcagagt 171120 aagtaggctg aggatggact ggttcaagtt atcttggcag gcagtgaagt tgggtagtgt 171180 acggcttccc tggcatgtgg ccctagggag accaggacag aagaatattg acgcagagtg 171240 tgagaggcca atcaaggaag tgtgggggct gagatatgtg cttctttact acctaggaat 171300 Page 103

PCT - Sequence listing for submission.txt.TXT

ctacgagaat ctcttcaggc tcagtcgagg ccccccaaac ggcaagcctg tctaagtaca 171360 ggaaacaggc aagattaata tggaatagtg gcgcaaacca attagctcaa aaatttccac 171420 aaccccatgt attagccctc tgctcagctc agggagataa tgagaacaca taacggaagc 171480 tcccagttca ccaatgcaac tggggagcgg ggggggatgg gtacctcaac cactcttaat 171540 gagtctgtag actaagataa cagaatggca gtcttccatc aacatgaggt aaagctagca 171600 tggcacctca gcctttcaaa gttactgttc actgaaatgt tattagaaaa attgccaatt 171660 gtgataaagc ctatggatca aacactactc ccattgcaag gaacattcat aaacagaaag 171720 ctgttgtcag tccccgaaac ttaaactgta tagagcagag aaaacctgga agagggaagc 171780 gccataatac ggatgagaaa acagggctag gggctcgtaa atggcagatc aggaaggaat 171840 cccatccgcc ttggagttgg tgatcttgta atgttcagag aatggactca tttcaactca 171900 caggttcggt gtgacccacg tgcttgctga agcaccgtgc ttactgtatg gtgctacaca 171960 agtgaggtct ctcataagct gcagagacac agaaaagtct caagggacag gtgggtgcat 172020 gtgtccaaga cctggtcgag cagttaatac gtccaggttg tggcttgtgc tctgcttcat 172080 tagtgtgttg ccagcgacta ggaatgtgac ggctaccacc ttgctgtttg gactcatttc 172140 atggggtaac tgcagcaggc acagggaatg agctaagaca gaccctgggt gagggaggca 172200 gctcatcttc aatgcccgga gagcacaacc tatctgatct gatatactct ccagtttaca 172260 aactactgac aatcacatca agtgaagggc agctgcagcc acagctctcc cttgttcaca 172320 gtttgctttc cttggttcta gttacctgaa ggcaactatg acataacaat attaaatgga 172380 aaattacaga aataaagtag ttccttggcc tcaagttgcc tgccactgga agttacagga 172440 agccatcttg ttgtcctgct ctgtaagggt cctccctttc tgcaacggat ccaggctgta 172500 tacccaacca tcggctagcg acgtcataga gatctgagta gaacaagtgc tgttgttcaa 172560 gtacccctga ctttacttaa cagtgacccc caaacgggaa aaagagtagt gttggcaact 172620 tattacagcc aaaaacatgt tattacaatg tatttttatg actgctgtat tgatactgtt 172680 aattgctggt tataattaag cttcgttata gatacgtatt tataggaatt agcagcatac 172740 atcaggtttg gtggtattta tggtttcagg aatctactac agatctttga aagtatctcc 172800 ctcacaggga gagagactac tgtaccattg ctcttcaatg gtgactccta atactggcat 172860 atagacagct ctgctgacct tttagaagtg ccagagaaca ggcactctgg acacagcgct 172920 gctcttggcc tcgagggatc tgcaagaagg aatggaggga aggatatgtc tctggggacc 172980 agetteteet ttgaacatge aggaactaat gagacgettt ttgaaggagt ccaggtgagt 173040 gacacctatt aaaggtgctt agttaatgct catccccata aacgcccatt acggcgacag 173100 gttcccacta ctcagccgga acgtttgagc tctagatgct cctctgaaga aatggctgaa 173160

```
PCT - Sequence listing for submission.txt.TXT
aaatcaggga gagatgctaa acccaaacac agtagcagtg ctggcaggag atgagccagg 173220
ctggtgagct gttcgtaaac cagctgtccc cgcccccaag actggagagt acagagaatt 173280
ccatgcaccc agggtcgtct taagacatga acatgctttc agagctgcat ccctaagaaa 173340
ctcctacaaa cctgctccag accatgaccc tgcaggctct gtctcacccc tgcccttcca 173400
ctcagctgct cctgagttac agcctggcta aaatagcaat gctacatttt ctgccatttg 173460
ggggccactg aggcaaatga tcatgttgaa ggggtaactg gctattcact caaacctctg 173520
cattcctcag tgagaggaca gtctcagagg atcccaccag gatgtgctgg ctctgcatgg 173580
tgggtgtcag aactacattc gatttgcagg taccatatgg tgtttgcggg gctggaaccc 173640
tgcttgtggg tattgaaaat cacgtactgg gagtcaggag cgttgtgagt acaaacattt 173700
cagagtgttg agagtgcttg gtgggggttt aggaacaagg caggctctga cttaccagaa 173760
ctgcagcttt tattctgaag tttcttttaa gaaccaagat taggggctgg agagatggct 173820
cagaggttaa gagcacccga ctgctcttcc gaaggtcctg agttcaaatc ccagcaacca 173880
catggtggct cacaaccatc tgtaatgaga tctgactccc tcttctgggg tgtctgaaga 173940
cagctacggc gtacttacat agaataaata aataaataaa tctttaaaaa aagaaaaaaa 174000
gctctcgaga acatgacagg gtggggtgtg cagataagaa ggctctagct agggtagctg 174120
gaatccctct ttcaacgatg gcgaagcact ggcacccgta gaaagaagga atgatacgaa 174180
tcagcccact attctgaact atgtccctgc ccagacacag aggcacatgc tgggcctgca 174240
gcaaatagcc ctggagccac actcgtggtt ggcgtgcaga ggaggaacca acccatcaga 174300
actctgtccg tgtgggtgtg tgtaggtgcc tgtggtgaag gtcagaggtc aactcaggtg 174360
tccaatccag gctccttttg aacttctagc ttagtttgtc aacactggca gctgaattgg 174420
gtttgtttgt ttgttttttg agatgtgatc ttgatctgca gcccaggctg ggcttgaatt 174480
                                                                174481
C
<210>
<211>
      5293
<212>
      DNA
<213> Sus scrofa
<220>
<221> misc_feature
<222> (3177)..(3178)
<223> n is a, c, g, or t
```

<400> 7
aaagggaatt tcatcccaaa taaaaggaat gaagtctggc tccggaggag ggtccccgac 60
ctcgctgtgg gggctcctgt ttttctccgc cgcgctctcg ctctggccga cgagtggaga 120

PCT - Sec aatctgcggg ccgggcattg acatco	uence listing gcaa cgactacca	for submissi g cagctgaagc	on.txt.TXT gcctggagaa	180
ctgcacggtg atcgagggct acctcc	acat cctgctcato	tccaaggctg	aggactaccg	240
cagctaccgc tttcccaagc tcacgg	tcat caccgagtad	ctgctgctgt	tccgtgtggc	300
tggccttgag agccttggcg acctct	tccc caatctcac	gtcatccgcg	gctggaagct	360
cttctacaac tacgccctgg tcatct	tcga gatgaccaad	ctcaaggaca	tcgggctcta	420
caacctgagg aatattaccc gggggg	ccat caggatcgag	g aagaatgcyg	acctctgcta	480
cctctctacg gtggactggt ccctga	tcct ggatgccgtg	tccaataact	acatcgtggg	540
caacaagccc cctaaggaat gcgggg	actt gtgcccagg	acgctggagg	agaagccgct	600
gtgtgagaag acgaccatca acaacg	agta caactatcgo	tgctggacca	cgaaccgctg	660
ccagaaaatg tgcccgagcg tgtgcg	ggaa gcgggcgtg	acagagaacc	acgagtgctg	720
ccaccccgag tgcctgggca gctgca	gcgc acccgacaa	gacacrgcct	gtgtggcctg	780
ccgccactac tactacgccg gagtct	gcgt gcccagctgo	ccacccaaca	cctaccgctt	840
cgagggctgg cgctgcgtgg accgcg	actt ttgcgccaad	atccccagtg	cggagagcag	900
tgactccgag ggctttgtga tccatg	atgg sgagtgcatg	caggagtgcc	cttcaggctt	960
catccgcaat ggcagccaga gcatgt	actg tatcccttg	gaaggccctt	gccccaaagt	1020
ctgtgaggaa gagaagaaga caaaga	ccat tgattctgto	acttctgctc	agatgctcca	1080
aggatgcacc atcttcaagg gcaacc	tgct cattaacato	cgacgcggca	acaacattgc	1140
ctcggagcta gagaacttca tggggc	tcat cgaggtggtg	acgggctacg	tgaagatccg	1200
ccactcccat gccttggtct ccttgt	cctt cctgaaaaa	cttcgccaga	tcctagggga	1260
ggagcagctg gaggggaatt actcct	tcta cgtccttgad	aaccagaact	tgcagcagct	1320
gtgggactgg gaccatcgca acctga	ccat caaagctgg	g aaaatgtact	ttgctttcaa	1380
tcccaaattg tgtgtctccg agattt	accg catggaggaa	gtgacaggga	ctaaagggcg	1440
ccagagcaaa ggggacataa acacca	ggaa caatggagag	g agagcctcct	gtgaaagtga	1500
cgtcctkcac ttcacctcca ccacca	cgtg gaagaaccg	atcatcatca	cctggcaccg	1560
ataccggccc cctgactaca gggacc	tcat cagcttcact	gtctactaca	aggaagcgcc	1620
ctttaaaaac gtcacggagt atgatg	ggca ggatgcctg1	ggctccaaca	gctggaacat	1680
ggtggacgtg gacctccctc ccaata	agga cgtcgagcc1	ggcattctac	tgcatgggct	1740
gaagccctgg acacagtacg cygttt	acgt craggccgtg	accctcacca	tggtggagaa	1800
tgaccacatc cgtggggcca agagtg	agat cttgtacati	cgcaccaatg	cttcagttcc	1860
ttccattccc ctggatgtcc tctcag	catc aaactcctc1	tctcagctga	tagtgaagtg	1920
gaacccgccc tccctgccca atggca	acct gagctactac	atcgtgcggt	ggcagcgcca	1980
gcctcaggac agctatctct accggc	ataa ttactgctco Page	aaaggtgagg 106	gggacatggg	2040

PCT - Sequence listing for submission.txt.TXT 2100 acacctgtgg ctctgactcc cgagccctat gctacgcatt cagcatcagg ctgctgctgt gtgcagcctt ggccatggtc acaggtgcta accgyggtgt cytcccgtac cggttgggta 2160 2220 acttggctct ccttgggctg ctcttttcca agcagacaaa atccccatca ggaagtatgc 2280 tgatggcacc attgatgtcg aggaggctac agagaacccc aagactgaag tgtgtggcgg 2340 ggagaaggga ccatgctgtg cttgccccaa aacagaagct gagaagcagg cagagaagga 2400 ggaggctgag taccgcaagg tcttcgagaa cttcctgcac aatgccatct ttgtgcccag 2460 acctgaacgg aagcggaggg aggtcatgca ggtcgccaay accaccatgt ccagccggag 2520 cagaaacacc acagtggtgg acacctacaa tgtcacggac ccagaggagc ttgagacaga 2580 gtaccctttt tttgagagca gagtggataa caaggagaga actgtcattt ccaacctccg 2640 gccttttact ttgtaccgaa ttgacatcca cagctgtaac catgaggctg agaagctggg ctgcagtgcc tccaactttg tctttgcaag aaccatgcct gcaggtatgg tgtgatccag 2700 2760 tcactccatt cctaattcac tcacagcctt gatttgtaca gatggaggct gacacccagg 2820 gcaatgaccc ttactctcag tcctgcttat taaagaatga gtggtctttt gtaggcagct cactagtcca gcagcccagg aatggagttc attcatagca accccactct ctccccagtc 2880 2940 tctccataca gagtgcttga gagcagggaa ctcaattcag ggtctacact ttccctctcc 3000 ttggttcatg ttgtgcattg ccgtgggccc ttttttttgc ccatttatgc aaagggaaat 3060 ttgccaggtc tctcctgagt tctcagagat tctgtgaaat cctcagttgg ctgccctgaa 3120 tcaaagtgag tgtagctcct gaaggtcagc tcccagagca gcttcgcgtc ctgcttgttt 3180 ggtcctcacc ttcctcttct tttagaagct acctgtggcc cagacagcaa gccatcnnaa 3240 cgtctgcagt cctgtatgca tggttgaaga gggtattctt aggtttaatc cagcattttt 3300 3360 tgtctttttt gggggacttg agtctaactt cattgcttgt ttcaattgtt gcacagaagg 3420 agcagatgac attcctgggc cagtgacctg ggagccacgg cctgagaact ccatctttt 3480 aaagtggcca gaacctgaga atcctaatgg attgattcta atgtatgaaa taaaatacgg atcacaagtc gaggatcagc gggaatgtgt gtccagacag gagtacagga agtatggagg 3540 3600 ggccaagctg aacaggctca acccggggaa ctacacggcc cggattcagg ccacctctct 3660 ctccgggaat gggtcatgga cggaacctgt gttcttctac gtccaggcca aaacgacata tgaaaacttc atccatctga tcatcgccct accagtggcc gttctgttga tagtaggagg 3720 3780 gttggttata atgttgtacg tcttccacag aaagagaaat aacagcaggc tggggaatgg agtgctgtat gcttccgtga acccggagta cttcagcgca gctgatgtgt acgtgcccga 3840

cgagtgggag gtcgcccggg agaagatcac catgagccgg gagctgggac agggctcctt

3900

		PC	T - Seguenc	e listina f	or submissi	on.txt.TXT	
cgggatgg	gtt	tatgaaggcg	tcgccaasgg	ygtggtcaaa	gatgagcctg	agaccagggt	3960
ggccatta	aag	acagtgaatg	aggccgccag	catgcgygag	aggattgagt	ttctcaacga	4020
ggcctccg	gtg	atgaaggagt	tcaactgtca	ccacgtggtg	agggaagggc	cccaagggtt	4080
gggrccad	ссс	ttatgggttt	gcgactcatc	ctgtctctgt	aggatcccts	tcactgctca	4140
agaaggtt	tgg	gggggatgtg	caggtccagg	gagtctggtg	ccacatcatc	cagggttgct	4200
cagggtgg	gtc	ctggtggggt	tggggggctg	cgggggctca	cccctgtct	ccttctcttt	4260
cccctca	aca	ggtgcggctg	ctgggtgtgg	tgtcccaggg	ccagccaacg	ctggtcatca	4320
tggaactg	gat	gacccggggg	gacctcaaaa	gttatctccg	gtctctgaga	ccagaaatgg	4380
agaataat	tcc	agtcctagca	cctccaagcc	taagcaaaat	gatccagatg	gctggagaga	4440
tygcagat	tgg	catggcatac	ctcaacgcca	ataagtttgt	ccacagagac	ctcgctgccc	4500
ggaactgy	/at	ggtggccgaa	gacttcacag	tcaaaatcgg	agattttggg	atgacgagag	4560
acatctat	tga	gacagactat	taccgcaagg	gagggaaagg	gctgctgcct	gtgcgctgga	4620
tgtcccct	tga	gtccctcaag	gacggagtct	tcaccacgca	ctctgatgtc	tggtccttcg	4680
gggtcgtd	cct	ctgggagatt	gccacgctgg	ccgagcagcc	ataccagggc	ttgtccaacg	4740
agcaagto	cct	tcgcttcgtc	atggagggcg	gccttctgga	caagccggac	aactgtcccg	4800
acatgctg	gtt	tgavctgatg	cgcatgtgct	ggcagtacaa	ccccaagatg	aggccttcct	4860
tcctggag	gat	catcagcagc	atcaaggayg	agatggagcc	tggcttccgg	gaggtctcct	4920
tctactac	cag	tgaggagaac	aagccgcctg	agccggagga	gctggacctg	gagccggaga	4980
acatggag	gag	cgtccccctg	gacccctcgg	cctcctcgtc	ctccctgccg	ctgcccgaca	5040
gacactca	agg	acacaaggct	gagaacggcc	caggccctgg	cgtgctggtg	ctgcgagcca	5100
gcttcgad	cga	gagacagcct	tacgcgcaca	tgaacggggg	ccgcaagaac	gagcgggccc	5160
tgcctctg	gcc	ccagtcctcg	acctgctgat	cctggatccc	gatcccgtgc	aaacagtacc	5220
gtgcgcad	cgc	gggcgggcgg	ggggagagtt	ttaacaatct	attcacaagc	ctcctgtacc	5280
tcagtgga	atc	ttc					5293
<211> 2 <212> 0	3 22 DNA Mus	musculus					
<400> 8 ggagatca	-	ggcagcatca	ag				22
<211> 2 <212> 0	9 21 DNA Mus	musculus					

		PCT - Sequence listing for submission.txt.TXT	
<400> gccatte		gccttgtgtc c	21
<210> <211> <212> <213>	10 21 DNA Mus	musculus	
<400> gcatgte	10 gctg	gcagtataac c	21
<210> <211> <212> <213>	11 21 DNA Mus	musculus	
	11 ccca	tgtcagttaa g	21
<210> <211> <212> <213>	12 21 DNA Mus	musculus	
<400> agagtg	12 gcca	tcaagacggt a	21
<210> <211> <212> <213>	13 19 DNA Mus	musculus	
<400> ggcctca		accggagat	19
<210> <211> <212> <213>	14 20 DNA Sus	scrofa	
<400> cctccg		gaaggagttc	20
<210> <211> <212> <213>	DNA	scrofa	
<400> tcagtte	15 ccat	gatgaccagc	20
<210><211><211><212>	16 20 DNA	scrofa	

<400> 16 cctccgtgat	gaaggagttc	20
<210> 17 <211> 20 <212> DNA <213> Sus	scrofa	
<400> 17 tcagttccat	gatgaccagc	20
<210> 18 <211> 19 <212> DNA <213> Sus	scrofa	
<400> 18 ggagtatgat	gggcaggat	19
<210> 19 <211> 20 <212> DNA <213> Sus	scrofa	
<400> 19 gaagcattgg	tgcgaatgta	20
<210> 20 <211> 12 <212> DNA <213> Mus	musculus	
<400> 20 tggagatgga	gc	12
<210> 21 <211> 17 <212> DNA <213> Sus	scrofa	
<400> 21 aagatgaggc	cttcctt	17
<210> 22 <211> 20 <212> DNA <213> Sus	scrofa	
<400> 22 gatcagcagg	tcgaggactg	20